

GenCore version 5.1.6
Copyright (c) 1993 - 2003 CompuGen Ltd.

OM protein - protein search, using sw model

Run on: June 27, 2003, 18:15:06 ; Search time 22 Seconds
(without alignments)
2491.587 Million cell updates/sec

Title: US-09-734-672-4

Perfect score: 9649

Sequence: 1 MDLSALRVEEVGNVINAMQK.....LYCCQLDPLVLPQIPHSY 1863

Scoring table: BLOSUM62

Gapop 10.0 , Gapect 0.5

Searched: 262574 seqs, 29422922 residues

Total number of hits satisfying chosen parameters: 262574

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database :

Issued_Patents_AA:*
1: /cgn2_6/prodata/1/1aa/5A_COMB.pep:*
2: /cgn2_6/prodata/1/1aa/5B_COMB.pep:*
3: /cgn2_6/prodata/1/1aa/6A_COMB.pep:*
4: /cgn2_6/prodata/1/1aa/6B_COMB.pep:*
5: /cgn2_6/prodata/1/1aa/PCTUS_COMB.pep:*
6: /cgn2_6/prodata/1/1aa/backfile1.pep:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	9649	100.0	1863	1 US-08-798-691-4	Sequence 4, Appl
2	9649	100.0	1863	3 US-08-825-487A-4	Sequence 4, Appl
3	9649	100.0	1863	4 US-09-074-476-6	Sequence 6, Appl
4	9642	99.9	1863	1 US-08-480-784-2	Sequence 2, Appl
5	9642	99.9	1863	1 US-08-483-553-2	Sequence 2, Appl
6	9642	99.9	1863	1 US-08-487-002-2	Sequence 2, Appl
7	9642	99.9	1863	1 US-08-483-554B-2	Sequence 2, Appl
8	9642	99.9	1863	1 US-08-488-011B-2	Sequence 2, Appl
9	9642	99.9	1863	4 US-08-850-727-2	Sequence 2, Appl
10	9642	99.9	1863	5 PCT-US95-10202-2	Sequence 2, Appl
11	9642	99.9	1863	5 PCT-US95-10203-2	Sequence 2, Appl
12	9642	99.9	1863	5 PCT-US95-10220-2	Sequence 2, Appl
13	9635	99.9	1863	1 US-08-598-591-2	Sequence 2, Appl
14	9635	99.9	1863	1 US-08-798-691-2	Sequence 2, Appl
15	9635	99.9	1863	1 US-08-798-691-6	Sequence 2, Appl
16	9635	99.9	1863	3 US-08-825-487A-2	Sequence 6, Appl
17	9635	99.9	1863	3 US-08-825-487A-6	Sequence 6, Appl
18	9635	99.9	1863	4 US-09-074-476-2	Sequence 2, Appl
19	9635	99.9	1863	4 US-09-074-476-4	Sequence 4, Appl
20	9630	99.8	1863	4 US-08-425-061-16	Sequence 16, Appl
21	9630	99.8	1863	2 US-08-825-886-16	Sequence 16, Appl
22	9581	99.3	1863	4 US-08-603-753D-2	Sequence 2, Appl
23	9581	99.3	1863	4 US-09-099-753-2	Sequence 2, Appl
24	9581	99.3	1863	4 US-08-986-106-2	Sequence 2, Appl
25	9581	99.3	1863	4 US-09-007-678B-49	Sequence 4, Appl
26	9577	99.3	1852	1 US-08-425-061-24	Sequence 24, Appl
27	9577	99.3	1852	2 US-08-825-886-24	Sequence 24, Appl

28	6997	72.5	1363	1 US-08-425-061-23	Sequence 23, Appl
29	6997	72.5	1363	2 US-08-825-886-23	Sequence 23, Appl
30	6222	64.5	1202	1 US-08-425-061-22	Sequence 22, Appl
31	6222	64.5	1202	2 US-08-825-886-22	Sequence 22, Appl
32	4730	49.0	914	1 US-08-425-061-21	Sequence 21, Appl
33	4730	49.0	914	2 US-08-825-886-21	Sequence 21, Appl
34	4621	47.9	900	1 US-08-425-061-20	Sequence 20, Appl
35	4621	47.9	900	2 US-08-825-886-20	Sequence 20, Appl
36	3958	41.0	765	1 US-08-425-061-19	Sequence 19, Appl
37	3958	41.0	765	2 US-08-825-886-19	Sequence 19, Appl
38	1596	16.5	312	1 US-08-425-061-18	Sequence 18, Appl
39	1596	16.5	312	2 US-08-825-886-18	Sequence 18, Appl
40	1563	16.2	309	2 US-08-785-464-5	Sequence 5, Appl
41	1552	16.1	301	2 US-08-785-464-1	Sequence 1, Appl
42	1020	10.6	196	2 US-08-785-464-3	Sequence 3, Appl
43	558	5.8	106	2 US-08-785-464-2	Sequence 2, Appl
44	520	5.4	100	4 US-09-230-196-3	Sequence 3, Appl
45	492	5.1	92	2 US-08-785-464-4	Sequence 4, Appl

ALIGNMENTS

RESULT 1
US-08-798-691-4
Sequence 4, Application US/08798691
Patent No. 5750400
GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvarez, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
APPLICANT: Zeng, Bin
TITLE OF INVENTION: Coding Sequences of the Human
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: ONCORMED
STREET: 200 Perry Parkway
CITY: Gaithersburg
STATE: MD
COUNTRY: USA
ZIP: 20877
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Thomas Gallegos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
STRANDEDNESS: not relevant
TOPOLOGY: not relevant
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17

MAP POSITION: 17q21
US-08-798-691-4

Query Match 100.0%; Score 9649; DB 1; Length 1863;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1863; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

QY 1 MDLSALRVEEYQVNIINAMQKILCEPCICLLEKEPVSTKCDHIFCKFCMKLILNOKKGPSQ 60
DB 1 MDLSALRVEEYQVNIINAMQKILCEPCICLLEKEPVSTKCDHIFCKFCMKLILNOKKGPSQ 60
QY 61 CPLCKNDITKRSLOESTRFSQVLEVEELIKIICAFOLDTGLAYANSVNFPAKKNSEPHLKD 120
DB 61 CPLCKNDITKRSLOESTRFSQVLEVEELIKIICAFOLDTGLAYANSVNFPAKKNSEPHLKD 120
QY 121 EVSIIOGMYRNRAKRLQSEPEPNSLOETSLVSOLNIGVTRLTKQRIQPOKTSYVI 180
DB 121 EVSIIOGMYRNRAKRLQSEPEPNSLOETSLVSOLNIGVTRLTKQRIQPOKTSYVI 180
QY 181 ELGSDSESDYNAKATYCSVGDOELQITPOGTREISLDSAKKAACEFSETDVTNTEHHQ 240
DB 181 ELGSDSESDYNAKATYCSVGDOELQITPOGTREISLDSAKKAACEFSETDVTNTEHHQ 240
QY 241 PSNNDLWTEKRAERHPEKTYGSSVSNLHVEPGTNTHASSIOHENSLLTKDRMVE 300
DB 241 PSNNDLWTEKRAERHPEKTYGSSVSNLHVEPGTNTHASSIOHENSLLTKDRMVE 300
QY 301 KAEFCNKSOPGLARSOHNRWAGSKETCNDRTPTSTKRVLDLMDPLCERKEWKNOKLPC 360
DB 301 KAEFCNKSOPGLARSOHNRWAGSKETCNDRTPTSTKRVLDLMDPLCERKEWKNOKLPC 360
QY 361 SENRROTJEDYPMITLNSISIOKVNMWFSRSDLLSDSDSHDESNAKVAADVLYNDV 420
DB 361 SENRROTJEDYPMITLNSISIOKVNMWFSRSDLLSDSDSHDESNAKVAADVLYNDV 420
QY 421 EYSSGSEKIDLLASDPHEALICKSEYVSHKSVESNIEDKIFGKTYRKKASLPNLSHYTEN 480
DB 421 EYSSGSEKIDLLASDPHEALICKSEYVSHKSVESNIEDKIFGKTYRKKASLPNLSHYTEN 480
QY 481 LIIGAFYTERPOIIOERPLTNLKLKRRPTSGLHPEDFIKKADLAVQKTPENIINOCTNOTE 540
DB 481 LIIGAFYTERPOIIOERPLTNLKLKRRPTSGLHPEDFIKKADLAVQKTPENIINOCTNOTE 540
QY 541 QNCGVMTITNSGHNKTKGDSIONEKNPNPIESLEKESAFKTRKEPTSSISSINNELINTI 600
DB 541 QNCGVMTITNSGHNKTKGDSIONEKNPNPIESLEKESAFKTRKEPTSSISSINNELINTI 600
QY 601 HNSKAPKKNRLRRKSTRHITHALELVYSRNLSPNCTELQIDSCSSSEIKKKKYNOMPV 660
DB 601 HNSKAPKKNRLRRKSTRHITHALELVYSRNLSPNCTELQIDSCSSSEIKKKKYNOMPV 660
QY 661 RHRNRNLOLMGKEBPAIGAKKSNKPNEDQTSKRHSDTPELKLITNAPGSFTKCSMTSELKE 720
DB 661 RHRNRNLOLMGKEBPAIGAKKSNKPNEDQTSKRHSDTPELKLITNAPGSFTKCSMTSELKE 720
QY 721 FVNPSLPREKEKELETVKYVSNNAEDPKDMLSGERVLQTERSVSSISILVPTDVGTO 780
DB 721 FVNPSLPREKEKELETVKYVSNNAEDPKDMLSGERVLQTERSVSSISILVPTDVGTO 780
QY 781 ESISLLEVSTLGAKEPKNKCVSQCFAFENPKGLIHGCSKDNDRDTEGFKPLGHEVNHNS 840
DB 781 ESISLLEVSTLGAKEPKNKCVSQCFAFENPKGLIHGCSKDNDRDTEGFKPLGHEVNHNS 840
QY 841 RETSIEMSEELDAQYIQTNTFKVSKROSFAFNSPNAEBCATFSAHSGSLKKQSPRYT 900
DB 841 RETSIEMSEELDAQYIQTNTFKVSKROSFAFNSPNAEBCATFSAHSGSLKKQSPRYT 900
QY 901 FECEKEENQKKNESNKPQVNTNITAGFPVYGKDXDPVNAKOSTIGSGRFLCISQFPG 960
DB 901 FECEKEENQKKNESNKPQVNTNITAGFPVYGKDXDPVNAKOSTIGSGRFLCISQFPG 960
QY 961 NETGLITPNKHGLLONPYRIPPLPIKSFYKTKCKNMLLENEEHSMSEREMGNINIP 1020
DB 961 NETGLITPNKHGLLONPYRIPPLPIKSFYKTKCKNMLLENEEHSMSEREMGNINIP 1020

```

```

DB 961 NETGLITPNKHGLLONPYRIPPLPIKSFYKTKCKNMLLENEEHSMSEREMGNINIP 1020
QY 1021 STVSTISRNINIRENVFKASSNINENVGSSINENVGSSINENIGSDEMOAELGRNKPXL 1080
DB 1021 STVSTISRNINIRENVFKASSNINENVGSSINENVGSSINENIGSDEMOAELGRNKPXL 1080
QY 1081 NAMLRGLVLOPEYVKQSLPGSNCKHPEIKKOYEVEVQVNTDFSPYLLISDNLQOPGSS 1140
DB 1081 NAMLRGLVLOPEYVKQSLPGSNCKHPEIKKOYEVEVQVNTDFSPYLLISDNLQOPGSS 1140
QY 1141 HASOVCEPDDLDGDEIKEDTSPFANDIKESAVSKSVQGEISRSRSPPTHTHILQ 1200
DB 1141 HASOVCEPDDLDGDEIKEDTSPFANDIKESAVSKSVQGEISRSRSPPTHTHILQ 1200
QY 1201 GYRRGAKKLSESEENLSEDEBELPCFOHLLFGKNNNIPSOSTRSHVATPCLSKNTENL 1260
DB 1201 GYRRGAKKLSESEENLSEDEBELPCFOHLLFGKNNNIPSOSTRSHVATPCLSKNTENL 1260
QY 1261 LSLKNSLMDCSNOYITLAKASQEHHLSEETKCSASLFSQQSELEBDLTANTNTODPLIGS 1320
DB 1261 LSLKNSLMDCSNOYITLAKASQEHHLSEETKCSASLFSQQSELEBDLTANTNTODPLIGS 1320
QY 1321 SKOMRHOSESGVGLSDKELVSDDEERGTLLENNOEQSDNSNLGEAASGCESTSVSE 1380
DB 1321 SKOMRHOSESGVGLSDKELVSDDEERGTLLENNOEQSDNSNLGEAASGCESTSVSE 1380
QY 1381 DCSGLSSQSDILTTQOQDFTQOHNLIKLOQMAELEAVLEQHGSPNSYPSIISDSALE 1440
DB 1381 DCSGLSSQSDILTTQOQDFTQOHNLIKLOQMAELEAVLEQHGSPNSYPSIISDSALE 1440
QY 1441 DLRNPBOSTSKAVLTSQKSEYPISONPGLSADKEFVSADSTSKNEPEVERSSPSK 1500
DB 1441 DLRNPBOSTSKAVLTSQKSEYPISONPGLSADKEFVSADSTSKNEPEVERSSPSK 1500
QY 1501 CPSLDDRYMHSCGSIQNNRYPSQELIKVYVDEEQULEESGPHDLETSTYLPRODLBG 1560
DB 1501 CPSLDDRYMHSCGSIQNNRYPSQELIKVYVDEEQULEESGPHDLETSTYLPRODLBG 1560
QY 1561 TPYLESGISLFDSDPESDPEEDRAPESARVGINIPSSALKVQPLKVAESAQSPAAHNT 1620
DB 1561 TPYLESGISLFDSDPESDPEEDRAPESARVGINIPSSALKVQPLKVAESAQSPAAHNT 1620
QY 1621 DTAGYNAEBSVSEKPELTAFTERVNRKMSMVVSGLTPEEFMLVYKFAKHHITLTNLI 1680
DB 1621 DTAGYNAEBSVSEKPELTAFTERVNRKMSMVVSGLTPEEFMLVYKFAKHHITLTNLI 1680
QY 1681 TEETHYVMKTDAEFVCERTILKTYFLGIAGKVVYSYFWYQSIKERKMLNEHDEFYRGDY 1740
DB 1681 TEETHYVMKTDAEFVCERTILKTYFLGIAGKVVYSYFWYQSIKERKMLNEHDEFYRGDY 1740
QY 1741 VNGRHHOGPKRARESODRKIFRGLEICCYGPTNMPDTQLEWVYQLGASVYKELSSFTL 1800
DB 1741 VNGRHHOGPKRARESODRKIFRGLEICCYGPTNMPDTQLEWVYQLGASVYKELSSFTL 1800
QY 1801 GTGVHPIVYVQPAWTEDNCFHAIIGOMCAPVYTRBMVLDVALVQCGELDTYLLPOLPH 1860
DB 1801 GTGVHPIVYVQPAWTEDNCFHAIIGOMCAPVYTRBMVLDVALVQCGELDTYLLPOLPH 1860
QY 1861 SHY 1863
DB 1861 SHY 1863

```

RESULT 2
US-08-825-4874-4
Sequence 4, Application US/088254874
Patent No. 6048689
GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
APPLICANT: White, Margie B.
TITLE OF INVENTION: METHODS FOR IDENTIFYING VARIATIONS IN POLYNUCLEOTIDE SEQUE
NUMBER OF SEQUENCES: 110
CORRESPONDENCE ADDRESS:

```

ADDRESSER: Howrey & Simon
STREET: 1299 Pennsylvania Avenue., N.W.
CITY: Washington,
STATE: DC
COUNTRY: USA
ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/825.487A
FILING DATE: 28-MAR-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US98/060002
FILING DATE: 26-Mar-1998
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Albert P. Halluin
REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: 03571.0012.999
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-463-8100
TELEFAX: 650-463-8400
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
STRANDEDNESS: not relevant
TOPOLOGY: not relevant
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-825-487A-4

Query Match      100.0%; Score 9649; DB 3; Length 1863;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1863; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```

```

421 EYSGSSEKIDLLASDPHEALICKSERVHKSVESENIEDKIFGKYRKASLPNLHVLEN 480
421 EYSGSSEKIDLLASDPHEALICKSERVHKSVESENIEDKIFGKYRKASLPNLHVLEN 480
481 LIIGAFVTEPQIIQERPLTNKLRKRRPTSGLHPEDFIKKADLAOKTPEMINOCTNOTE 540
481 LIIGAFVTEPQIIQERPLTNKLRKRRPTSGLHPEDFIKKADLAOKTPEMINOCTNOTE 540
541 ONGQVMTNTSGHEKTKGDSIQNEKNRPTEISLEKESAFKKAPDISISSIMLELNI 600
541 ONGQVMTNTSGHEKTKGDSIQNEKNRPTEISLEKESAFKKAPDISISSIMLELNI 600
601 HNSKAPKRNRLRKSTRIHALFVSRNLSPPCTEIQDSCSSSEIRKKKKKNOMPV 660
601 HNSKAPKRNRLRKSTRIHALFVSRNLSPPCTEIQDSCSSSEIRKKKKKNOMPV 660
661 RHRNRLQMEGKEPATGAKSNKPNEDQTSKRHSDPTPELKLTPNAGSFTKCSNTSELKE 720
661 RHRNRLQMEGKEPATGAKSNKPNEDQTSKRHSDPTPELKLTPNAGSFTKCSNTSELKE 720
721 FVNPSPLEPEKEKELETYKVSNNADPPKDLMSGERVLTQTERSVSSSISLVPGETDYGQ 780
721 FVNPSPLEPEKEKELETYKVSNNADPPKDLMSGERVLTQTERSVSSSISLVPGETDYGQ 780
781 ESISLEEVSTLGAKTEPNKCVSOCAEPNPKGLHGCSDKNRNDTEGFKYPLGHEVHNS 840
781 ESISLEEVSTLGAKTEPNKCVSOCAEPNPKGLHGCSDKNRNDTEGFKYPLGHEVHNS 840
841 RETSIEMESELDAQYLONTFKVSKROSFALEPNFGMAEEECATFSAHSGSLKKOSPKYT 900
841 RETSIEMESELDAQYLONTFKVSKROSFALEPNFGMAEEECATFSAHSGSLKKOSPKYT 900
901 FECEQKEENOGKNEENIKPVQVTNITAGPPVQGDKPDVNAKCSIKGSRPCLSSOPFG 960
901 FECEQKEENOGKNEENIKPVQVTNITAGPPVQGDKPDVNAKCSIKGSRPCLSSOPFG 960
961 NETGLITPNKIGLONPYRIPPLPIKSFVKCKCKNLLNEEFHSHMSPEREMENIP 1020
961 NETGLITPNKIGLONPYRIPPLPIKSFVKCKCKNLLNEEFHSHMSPEREMENIP 1020
1021 STVSTISRNNIRENVFKASSNINEVGSSTINEVGSINIEGSSDENIQALGRRNGPKL 1080
1021 STVSTISRNNIRENVFKASSNINEVGSSTINEVGSINIEGSSDENIQALGRRNGPKL 1080
1081 NAMRLGVLOPEVYQSLPGSNCKHPEIKQEEYVQVTNTDESPYILSDNLEOPKSS 1140
1081 NAMRLGVLOPEVYQSLPGSNCKHPEIKQEEYVQVTNTDESPYILSDNLEOPKSS 1140
1141 HASQVSETPDDLDGDEIKEDTSPAENDIKESAVFSKSVQKGLSRSPSPFTHTLHQ 1200
1141 HASQVSETPDDLDGDEIKEDTSPAENDIKESAVFSKSVQKGLSRSPSPFTHTLHQ 1200
1201 GYRRGAKKLESSEENLSEDEBELPCFOHLFEGKVNIPDSQSTRHSTVATECLSKTEENL 1260
1201 GYRRGAKKLESSEENLSEDEBELPCFOHLFEGKVNIPDSQSTRHSTVATECLSKTEENL 1260
1261 LSKNSLNDCSNOVILAKASQEHNLSEETKCSASFSSQCSLELDTANTNTODPFLIGS 1320
1261 LSKNSLNDCSNOVILAKASQEHNLSEETKCSASFSSQCSLELDTANTNTODPFLIGS 1320
1321 SKOMRQESQGVGLSDKEIVSDDERGTGLENNQEQSMNSNGEASGCESTVSSE 1380
1321 SKOMRQESQGVGLSDKEIVSDDERGTGLENNQEQSMNSNGEASGCESTVSSE 1380
1381 DCSGSSQSDILITTOQRPDMOHLIKLOEAAELFAVLEOHGSOQSPNSYPSIISDSALE 1440
1381 DCSGSSQSDILITTOQRPDMOHLIKLOEAAELFAVLEOHGSOQSPNSYPSIISDSALE 1440
1441 DLRNPEOSTSKAVITLQKSSSEYPSQNEPGLSADKFEVSDSSSKKKEGVESSPSK 1500
1441 DLRNPEOSTSKAVITLQKSSSEYPSQNEPGLSADKFEVSDSSSKKKEGVESSPSK 1500
1501 CPSLDDRWYMHSCGSLONRNPVPSQEBELIKVVAVEEOQLSESGPHDLTETSYLPRODLEG 1560

```

```

Db      1501 CPSLDDRWYMSGSSGLQNRNPPSQEELIKYVDVEQOLEESGPHDLETSTYLPDRLLEG 1560
QY      1561 TPYLESGISLSDDESPDESDRAPEASRVNIPSTSLAKYPOLKVAESAOPAAHTT 1620
Db      1561 TPYLESGISLSDDESPDESDRAPEASRVNIPSTSLAKYPOLKVAESAOPAAHTT 1620
QY      1621 DTAGYNAMEESVSRKPELTASTERYNKRMSVSGLPPEEMLYKKFARKHITLTNLI 1680
Db      1621 DTAGYNAMEESVSRKPELTASTERYNKRMSVSGLPPEEMLYKKFARKHITLTNLI 1680
QY      1681 TEETHYVYMKTDAEVVCERTLKYFLGIGAGKVVSYFWTQSIKERKMLNEDFEYRGCV 1740
Db      1681 TEETHYVYMKTDAEVVCERTLKYFLGIGAGKVVSYFWTQSIKERKMLNEDFEYRGCV 1740
QY      1741 VNGRNHQPKRARESDQRIKIFGLICCYGPTNPTDLEMMVQLGASVYKELSSFTL 1800
Db      1741 VNGRNHQPKRARESDQRIKIFGLICCYGPTNPTDLEMMVQLGASVYKELSSFTL 1800
QY      1801 GTGVHPYVYVQPDANTEEDNGFHAIGQCEAPVYTRBWLDSVALYQCELDYTLIPQIPH 1860
Db      1801 GTGVHPYVYVQPDANTEEDNGFHAIGQCEAPVYTRBWLDSVALYQCELDYTLIPQIPH 1860
QY      1861 SHY 1863
Db      1861 SHY 1863

RESULT 3
US-09-074-476-6
; Sequence 6, Application US/09074476
; Patent No. 6130322
; GENERAL INFORMATION:
; APPLICANT: Murphy, Patricia D.
; APPLICANT: Allen, Antonette C.
; APPLICANT: Alvarez, Christopher P.
; APPLICANT: Citez, Brenda S.
; APPLICANT: Olson, Sheri J.
; APPLICANT: Thurber, Denise
; APPLICANT: Zeng, Bin
; TITLE OF INVENTION: Coding Sequences of the Human
; TITLE OF INVENTION: BRCA1 Gene
; NUMBER OF SEQUENCES: 72
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Howrey & Simon
; STREET: 1299 Pennsylvania Avenue N. W.
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/09/074.476
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: 09/074.453
; FILING DATE:
; ATTORNEY/AGENT INFORMATION:
; NAME: Albert P. Halluin
; REGISTRATION NUMBER: 25.227
; REFERENCE/DOCKET NUMBER: 5371.34.US01
; TELEPHONE: 650-463-8109
; TELEFAX: 650-463-8400
; INFORMATION FOR SEQ ID NO: 6:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1863 amino acids
; TYPE: amino acid

```

```

; STRANDEDNESS: not relevant
; TOPOLOGY: not relevant
; MOLECULE TYPE: Protein
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; STRAIN: BRCA1 (om13)
; POSITION IN GENOME:
; CHROMOSOME/SEGMENT: 17
; MAP POSITION: 17q21
; US-09-074-476-6

Query Match      100.0%; Score 9649; DB 4; Length 1863;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 1863; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY      1 MDLSARVEEYONVYNNAMOKITLCEPICELKEVYSRKCHITPCKFQMLKLNOKKPSQ 60
Db      1 MDLSARVEEYONVYNNAMOKITLCEPICELKEVYSRKCHITPCKFQMLKLNOKKPSQ 60
QY      61 CPLKNDITKRSLSQESTREFSOLVBEELKTIICAFQOLDGLEYANSYNRAKKENNSPEHLKD 120
Db      61 CPLKNDITKRSLSQESTREFSOLVBEELKTIICAFQOLDGLEYANSYNRAKKENNSPEHLKD 120
QY      121 EYSITIQSGYNNRAKRLIQSEPNPSLOETISLVQSLNLTGTVRTLRKRIQPKTSVYI 180
Db      121 EYSITIQSGYNNRAKRLIQSEPNPSLOETISLVQSLNLTGTVRTLRKRIQPKTSVYI 180
QY      181 ELGSDSDEDTYNNKATYCSVGQDELQITPGQTRDEISLDSKAKACESTDTYNTNHHQ 240
Db      181 ELGSDSDEDTYNNKATYCSVGQDELQITPGQTRDEISLDSKAKACESTDTYNTNHHQ 240
QY      241 PSNNDLNTTEKRAAREHPEKYQSGSVSNLHVEPCGNTTHASSLOHENSLLTKRDMNVE 300
Db      241 PSNNDLNTTEKRAAREHPEKYQSGSVSNLHVEPCGNTTHASSLOHENSLLTKRDMNVE 300
QY      301 KAERCNKSQKGLARSOHNRWAGSKETCNDRPTSTKKYDLNADPLCEKKNKKKLP 360
Db      301 KAERCNKSQKGLARSOHNRWAGSKETCNDRPTSTKKYDLNADPLCEKKNKKKLP 360
QY      361 SENPDTEVPMTILNNSIQVNMFSRSDPLGSDSHGSESSNAKVADVDTYNEVD 420
Db      361 SENPDTEVPMTILNNSIQVNMFSRSDPLGSDSHGSESSNAKVADVDTYNEVD 420
QY      421 EYSGSSEKIDLLASDPHEALICKSERVSHSVESNIEDKIFGTYRKKASLPMLSHVTEN 480
Db      421 EYSGSSEKIDLLASDPHEALICKSERVSHSVESNIEDKIFGTYRKKASLPMLSHVTEN 480
QY      481 LIIGAFYTERPIIDERPILTKLKKRRPTSGIHPEDETRKADLAVOXTPEMINOGTNOTE 540
Db      481 LIIGAFYTERPIIDERPILTKLKKRRPTSGIHPEDETRKADLAVOXTPEMINOGTNOTE 540
QY      541 QNGQVMTNTNGSHENKTKGDSIQNEKNPNPTELESKESAFTKTAEPITSSISNMELELN 600
Db      541 QNGQVMTNTNGSHENKTKGDSIQNEKNPNPTELESKESAFTKTAEPITSSISNMELELN 600
QY      601 HNSKAPKKNNRLRRKSTRHIALELYVSRNLSPNCTELQIDSCSSSEIKKKRYNQMEV 660
Db      601 HNSKAPKKNNRLRRKSTRHIALELYVSRNLSPNCTELQIDSCSSSEIKKKRYNQMEV 660
QY      661 RHSRNLQMEGKEPATGAKKSNKPNEOTSRRHSDTFPELKLINAGSFTKCSNSELKE 720
Db      661 RHSRNLQMEGKEPATGAKKSNKPNEOTSRRHSDTFPELKLINAGSFTKCSNSELKE 720
QY      721 FVNPSLPREKEKELETVKYSNNADEPKDMLSGERYLOTRESESSISLVPGTGYGQ 780
Db      721 FVNPSLPREKEKELETVKYSNNADEPKDMLSGERYLOTRESESSISLVPGTGYGQ 780
QY      781 ESISLEVSTLGAKTEPNKCVQCAAFENPKGLIHGCSKDNNDTEGGRYPLGHEVNS 840
Db      781 ESISLEVSTLGAKTEPNKCVQCAAFENPKGLIHGCSKDNNDTEGGRYPLGHEVNS 840
QY      841 RETISEBESLDAQYQNTFKYSKQSFALFNPQNAEBEACVTSAHSGSLAKKQPKYT 900
Db      841 RETISEBESLDAQYQNTFKYSKQSFALFNPQNAEBEACVTSAHSGSLAKKQPKYT 900

```


QY 121 EVSIIOSMGYRNARAKRLLOSEPENPSIQTSTLSVOLSNLGTVTLTKTORIOPOKTSYVI 180
 DB 121 EVSIIOSMGYRNARAKRLLOSEPENPSIQTSTLSVOLSNLGTVTLTKTORIOPOKTSYVI 180
 QY 181 ELGSDSSSEDTYVAKATYCSVGOELLOITPOGTRDEISLDSAKKAECFSETDVTNTEHHQ 240
 DB 181 ELGSDSSSEDTYVAKATYCSVGOELLOITPOGTRDEISLDSAKKAECFSETDVTNTEHHQ 240
 QY 241 PSNNDLNTEKRAARHPEKRYOGSSVSNLHVPCGNTASSLOHNSLLTLTKDMNTE 300
 DB 241 PSNNDLNTEKRAARHPEKRYOGSSVSNLHVPCGNTASSLOHNSLLTLTKDMNTE 300
 QY 301 KAEFCNKSQOPCLARSQHNRMWAGSKETCDNRPTPTSEKRVDLNADPLCEKREKKNOKLPC 360
 DB 301 KAEFCNKSQOPCLARSQHNRMWAGSKETCDNRPTPTSEKRVDLNADPLCEKREKKNOKLPC 360
 QY 361 SENPDOTEDVPWITLNSIQAQVNEWFSKDELIGSDSHDGESENAKAVADVLNEDV 420
 DB 361 SENPDOTEDVPWITLNSIQAQVNEWFSKDELIGSDSHDGESENAKAVADVLNEDV 420
 QY 421 EYSGSSEKIDLASPHALICKSERVHSKSVESNTEDKIFGKTKRKASLPLSHVTEN 480
 DB 421 EYSGSSEKIDLASPHALICKSERVHSKSVESNTEDKIFGKTKRKASLPLSHVTEN 480
 QY 481 LIIGAFVTEPOIIOERPLTNKLRKRPTSGLHPEDFIKADLAVQKPEMINOQTOTE 540
 DB 481 LIIGAFVTEPOIIOERPLTNKLRKRPTSGLHPEDFIKADLAVQKPEMINOQTOTE 540
 QY 541 ONGOVNITNSGHEKTKGDSIONENKPNPITSLKESAFKTKAPETSSISIMELINI 600
 DB 541 ONGOVNITNSGHEKTKGDSIONENKPNPITSLKESAFKTKAPETSSISIMELINI 600
 QY 601 HNSKAPKRNRLRKSSSTRIHALLELVSNHNLSPNCTELOIDSCSSSEIKKKKKYQMPY 660
 DB 601 HNSKAPKRNRLRKSSSTRIHALLELVSNHNLSPNCTELOIDSCSSSEIKKKKKYQMPY 660
 QY 661 RHSRLQIMEGKEPRTGAKSKNPNEDJTSKRHDSPTPELKLITNAPGFTKCSNTEKE 720
 DB 661 RHSRLQIMEGKEPRTGAKSKNPNEDJTSKRHDSPTPELKLITNAPGFTKCSNTEKE 720
 QY 721 FVNPSLPREKEKEKETVKSNNADPKDMLSGERVLOTERRSVSSISLVPBGDYQY 780
 DB 721 FVNPSLPREKEKEKETVKSNNADPKDMLSGERVLOTERRSVSSISLVPBGDYQY 780
 QY 781 ESISLEEVSTLGGKATEPNKCVSOCAAFENPKGLIHGSKDNRRNDEGEKYPILGHEVNS 840
 DB 781 ESISLEEVSTLGGKATEPNKCVSOCAAFENPKGLIHGSKDNRRNDEGEKYPILGHEVNS 840
 QY 841 RETSIEMEESLDAQYLONTFKVSKROSPALFSPGNAAEECATFSANHSGLKOSPKYT 900
 DB 841 RETSIEMEESLDAQYLONTFKVSKROSPALFSPGNAAEECATFSANHSGLKOSPKYT 900
 QY 901 FECEOKKEENOKNESINIKPVOTVNTAGFPVYGOKDPVDMKCSIKGSRCLSSQFPG 960
 DB 901 FECEOKKEENOKNESINIKPVOTVNTAGFPVYGOKDPVDMKCSIKGSRCLSSQFPG 960
 QY 961 NETGLITPNKHGLLONPYRIPPLPIKSFVTKCKKNLLEENFEHSHMSPEREMENENIP 1020
 DB 961 NETGLITPNKHGLLONPYRIPPLPIKSFVTKCKKNLLEENFEHSHMSPEREMENENIP 1020
 QY 1021 STVSTISNNINRENVFKASSNINEVSSSTINEGSSSINEIGSSDENIOAELGRRNGPKL 1080
 DB 1021 STVSTISNNINRENVFKASSNINEVSSSTINEGSSSINEIGSSDENIOAELGRRNGPKL 1080
 QY 1081 NAMRLGLVLOPEYVKOSLPGSNCKHPEIKKOYEVEVOTVNDPSPYILSDLEQPMSS 1140
 DB 1081 NAMRLGLVLOPEYVKOSLPGSNCKHPEIKKOYEVEVOTVNDPSPYILSDLEQPMSS 1140
 QY 1141 HASOVCSFETPDLLDDGEIKEDTSAENDIKESSAVFSKSVQKGLSRSPFTTHLAQ 1200
 DB 1141 HASOVCSFETPDLLDDGEIKEDTSAENDIKESSAVFSKSVQKGLSRSPFTTHLAQ 1200

QY 1201 GYRGAKKLESSEENLSEDEELPCFOHLLFGKVNINIPSOSTRHSTVATECLSKNTEENL 1260
 DB 1201 GYRGAKKLESSEENLSEDEELPCFOHLLFGKVNINIPSOSTRHSTVATECLSKNTEENL 1260
 QY 1261 LSLKNSLNDCSNOVILLAKASQEHLSSETKCASLFSQCSLEDELDTANTWTODPFLIGS 1320
 DB 1261 LSLKNSLNDCSNOVILLAKASQEHLSSETKCASLFSQCSLEDELDTANTWTODPFLIGS 1320
 QY 1321 SKOMRHOSRQSGVGLSDKELVSDDEBERGGLJEENNOEOMSNDNLGEAASCESETVSE 1380
 DB 1321 SKOMRHOSRQSGVGLSDKELVSDDEBERGGLJEENNOEOMSNDNLGEAASCESETVSE 1380
 QY 1381 DCSGLSSQSDILITTOORDTMOHNLIKLOEAMAEVAVLEQSGQPSNSYPSIISDSALE 1440
 DB 1381 DCSGLSSQSDILITTOORDTMOHNLIKLOEAMAEVAVLEQSGQPSNSYPSIISDSALE 1440
 QY 1441 DLRNPEQSTSEKAVLTSQKSSSEYPISONPEGLSADKFEVSADSSSTSKKKEGVRRSSPK 1500
 DB 1441 DLRNPEQSTSEKAVLTSQKSSSEYPISONPEGLSADKFEVSADSSSTSKKKEGVRRSSPK 1500
 QY 1501 CPSLDDRWYMHSCSGSLONRNPYSOEELIKVYVDEEQLESGPHDLTETSYLPROLEG 1560
 DB 1501 CPSLDDRWYMHSCSGSLONRNPYSOEELIKVYVDEEQLESGPHDLTETSYLPROLEG 1560
 QY 1561 TPYLESGLSLEFSDDEPDESDPEEDRAPESARVGNIBSSTALKVPOLKVAESAQSPAATT 1620
 DB 1561 TPYLESGLSLEFSDDEPDESDPEEDRAPESARVGNIBSSTALKVPOLKVAESAQSPAATT 1620
 QY 1621 DFRAGNAMEESYRREKPELTASTERVNKRMSVYVSGLPEEFMLVYFARKHHTLTNLI 1680
 DB 1621 DFRAGNAMEESYRREKPELTASTERVNKRMSVYVSGLPEEFMLVYFARKHHTLTNLI 1680
 QY 1681 TEETHVYVAKTDAEFVCEKRTIKYFLGIGAGKVVVSYFVWTOISIERKMLNHDPEVAGDV 1740
 DB 1681 TEETHVYVAKTDAEFVCEKRTIKYFLGIGAGKVVVSYFVWTOISIERKMLNHDPEVAGDV 1740
 QY 1741 VGNRHOGKRRARBSQDKIRIRGLEICCYGPTNPTDQLEWVYOLCGASVYELSEFTL 1800
 DB 1741 VGNRHOGKRRARBSQDKIRIRGLEICCYGPTNPTDQLEWVYOLCGASVYELSEFTL 1800
 QY 1801 GTGVHPYVOPDATTENGFGHAIQOMCEAVVVRREVWLSVALYQCOELDTYLIPOIPH 1860
 DB 1801 GTGVHPYVOPDATTENGFGHAIQOMCEAVVVRREVWLSVALYQCOELDTYLIPOIPH 1860
 QY 1861 SHY 1863
 DB 1861 SHY 1863

RESULT 5
 US-08-483-553-2
 ; Sequence 2, Application US/08483553
 ; Patent No. 5709999
 ; GENERAL INFORMATION:
 ; APPLICANT: Skolnick, Mark H.
 ; APPLICANT: Goldfarb, David E.
 ; APPLICANT: Miki, Yoshio
 ; APPLICANT: Swenson, Jeff
 ; APPLICANT: Ramb, Alexander
 ; APPLICANT: Harshman, Keith D.
 ; APPLICANT: Shattuck-Eidens, Donna M.
 ; APPLICANT: Tavligian, Sean V.
 ; APPLICANT: Wiseman, Roger W.
 ; APPLICANT: Futreal, P. Andrew
 ; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
 ; TITLE OF INVENTION: Susceptibility Gene
 ; NUMBER OF SEQUENCES: 85
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
 ; STREET: 1201 New York Avenue, N.W., Suite 1000
 ; CITY: Washington
 ; STATE: DC
 ; COUNTRY: USA

```

: ZIP: 20005
: COMPUTER READABLE FORM:
: MEDIUM TYPE: Floppy disk
: COMPUTER: IBM PC compatible
: OPERATING SYSTEM: PC-DOS/MS-DOS
: SOFTWARE: Patentin Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
: APPLICATION NUMBER: US/08/483,553
: FILING DATE:
: CLASSIFICATION: 435
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 08/409,305
: FILING DATE: 24-MAR-1995
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 08/348,824
: FILING DATE: 29-NOV-1994
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 08/308,104
: FILING DATE: 16-SEP-1994
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 08/300,266
: FILING DATE: 02-SEP-1994
: PRIORITY APPLICATION DATA:
: APPLICATION NUMBER: US 08/289,221
: FILING DATE: 12-AUG-1994
: ATTORNEY/AGENT INFORMATION:
: NAME: Ihnen, Jeffrey L.
: REGISTRATION NUMBER: 28,957
: REFERENCE/DOCKET NUMBER: 24884-109347
: TELECOMMUNICATION INFORMATION:
: TELEPHONE: 202-962-8300
: TELEFAX: 202-962-8300
: INFORMATION FOR SEQ ID NO: 2:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 1863 amino acids
: TYPE: amino acid
: TOPOLOGY: linear
: MOLECULE TYPE: protein
: US-08-483-553-2

```

```

Query Match          99.9%; Score 9642; DB 1; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

Db 421 EYSGSSEKIDLLASDPHEALICKSERVHASKSVESNIEDKIFGKTYRKKAASLPNLSHTYEN 480
OY 481 LIIGAFVTEPQIOERPLTNKIKRRRPTSGIHPEDFIKKADLAQKPEMNOGTNOTE 540
Db 481 LIIGAFVTEPQIOERPLTNKIKRRRPTSGIHPEDFIKKADLAQKPEMNOGTNOTE 540
OY 541 ONGOVMNTTNGSHEKTKGDSIONKKNPISLESKEAPFKAPPISSISMMLEINI 600
Db 541 ONGOVMNTTNGSHEKTKGDSIONKKNPISLESKEAPFKAPPISSISMMLEINI 600
OY 601 HNSKAPKKNRLRRKSTRIHALIELVSRNLSPPNCTEIQIDSCSSSEIKKKKNQMPV 660
Db 601 HNSKAPKKNRLRRKSTRIHALIELVSRNLSPPNCTEIQIDSCSSSEIKKKKNQMPV 660
OY 661 RHSRNLQMEGKEPATGAKKSNKPNEQTSKRHDSOTPELKLITNAPGSFTKCSNTSEIKE 720
Db 661 RHSRNLQMEGKEPATGAKKSNKPNEQTSKRHDSOTPELKLITNAPGSFTKCSNTSEIKE 720
OY 721 FVNPSLPREEKEKLETVKVSNNMADPKDMLSGSRVLTQTERSVSSSISLVPDGYCTO 780
Db 721 FVNPSLPREEKEKLETVKVSNNMADPKDMLSGSRVLTQTERSVSSSISLVPDGYCTO 780
OY 781 ESISLLEVTIGKAKTEPNKCVSOCAAFENPKGLIHGCSKDNNDTEGFKYPLGHEVHNS 840
Db 781 ESISLLEVTIGKAKTEPNKCVSOCAAFENPKGLIHGCSKDNNDTEGFKYPLGHEVHNS 840
OY 841 RETSIEMESELDAQYLONTFKVSKRGSFALFNSPNGNAEEBCATFSAHSGSLKKOSPYVT 900
Db 841 RETSIEMESELDAQYLONTFKVSKRGSFALFNSPNGNAEEBCATFSAHSGSLKKOSPYVT 900
OY 901 FECEOKEEKNOGKNESINIKPVQVNTTAFSPVYGOKDKVDNAKSKIKGSGRFLCSSQGRG 960
Db 901 FECEOKEEKNOGKNESINIKPVQVNTTAFSPVYGOKDKVDNAKSKIKGSGRFLCSSQGRG 960
OY 961 NETGLITPNKHGLQNPRIPLPEPKSVFTKCKKNLLEENFEHSHMSPEREMGENIP 1020
Db 961 NETGLITPNKHGLQNPRIPLPEPKSVFTKCKKNLLEENFEHSHMSPEREMGENIP 1020
OY 1021 STVSTISNNNTRENVFKASSSNINEVGSSSINEGSSSINETGSSSPENIQALGRRHGRKL 1080
Db 1021 STVSTISNNNTRENVFKASSSNINEVGSSSINEGSSSINETGSSSPENIQALGRRHGRKL 1080
OY 1081 NAMLRGLVLOPEVYKQSLPGSNCKRPEIKKQETEEVQVNTDPSPLYISNLEOPMSS 1140
Db 1081 NAMLRGLVLOPEVYKQSLPGSNCKRPEIKKQETEEVQVNTDPSPLYISNLEOPMSS 1140
OY 1141 HASQVCEPDDLLDDGEIKEDTSEFENDIKESSAVFSKSVQKGLSRSPFRTHTLQA 1200
Db 1141 HASQVCEPDDLLDDGEIKEDTSEFENDIKESSAVFSKSVQKGLSRSPFRTHTLQA 1200
OY 1201 GYRRGAKKLESSEERLSEDEELPCFOHLGLGKYNVNPISOSTRSHVATELSKTEPENL 1260
Db 1201 GYRRGAKKLESSEERLSEDEELPCFOHLGLGKYNVNPISOSTRSHVATELSKTEPENL 1260
OY 1261 LSLKNSLNDCSNOVYILAKASOEHHLSEETKCSASFSSQCELEDELITANTNTOPFLIGS 1320
Db 1261 LSLKNSLNDCSNOVYILAKASOEHHLSEETKCSASFSSQCELEDELITANTNTOPFLIGS 1320
OY 1321 SKQMRHOSQGVGLSDKEIVSDEERGDTGLENNQEBQMSDNLGEAASCESETSYSE 1380
Db 1321 SKQMRHOSQGVGLSDKEIVSDEERGDTGLENNQEBQMSDNLGEAASCESETSYSE 1380
OY 1381 DCSGLSSQSDILITQQOQRTQMHNLIKLOQEAELAEVLEQHGSPNSNYPISLISDSALE 1440
Db 1381 DCSGLSSQSDILITQQOQRTQMHNLIKLOQEAELAEVLEQHGSPNSNYPISLISDSALE 1440
OY 1441 DLRNPEOSTSEKAVILTSQSSSEYPISONPEGLISADKEFVSADSSSTKKEGVERSSPSK 1500
Db 1441 DLRNPEOSTSEKAVILTSQSSSEYPISONPEGLISADKEFVSADSSSTKKEGVERSSPSK 1500
OY 1501 CPSLDDRWYHSGSGSLQNNRNPQOEELIKVYVDEEQGLEESGPHDLTETSYLPRQDLEG 1560
Db 1501 CPSLDDRWYHSGSGSLQNNRNPQOEELIKVYVDEEQGLEESGPHDLTETSYLPRQDLEG 1560

```

```

Db 1501 CPSLDDRMVMSHSCSGLONRNP SOEELIKVVDVEEQULESGPHDLTETSYLPRDLEG 1560
QY 1561 TPYLESGISLFDSDPESDSEDRAPESARVGNIPSTSLAKYPOLKVAESAOPAAHTT 1620
Db 1561 TPYLESGISLFDSDPESDSEDRAPESARVGNIPSTSLAKYPOLKVAESAOPAAHTT 1620
QY 1621 DTAGNAMEESVSRKPELTASTERVNKRMSVSGLPPEFMYKFAKKHHTLTJNL 1680
Db 1621 DTAGNAMEESVSRKPELTASTERVNKRMSVSGLPPEFMYKFAKKHHTLTJNL 1680
QY 1681 TEETHVVMKTDAAEVCERTLKYFLGJAGCKWVSVFWTOSIKERKMLNEDFEVRGV 1740
Db 1681 TEETHVVMKTDAAEVCERTLKYFLGJAGCKWVSVFWTOSIKERKMLNEDFEVRGV 1740
QY 1741 VGNRHHGCPKRARESDQRIKIFGLICCYGPTNNPTDQLEMMVOLCGASVYKELSSFTL 1800
Db 1741 VGNRHHGCPKRARESDQRIKIFGLICCYGPTNNPTDQLEMMVOLCGASVYKELSSFTL 1800
QY 1801 GTGVHPVIVVOPDANTEGDFHAIQOMCEAPVVTREWLDVVALYQCCQLDTYLLJPQIP 1860
Db 1801 GTGVHPVIVVOPDANTEGDFHAIQOMCEAPVVTREWLDVVALYQCCQLDTYLLJPQIP 1860
QY 1861 SHY 1863
Db 1861 SHY 1863

```

RESULT 6

```

US-08-487-002-2
Sequence 2, Application US/08487002
Patent No. 571001
GENERAL INFORMATION:
APPLICANT: Shattuck-Eldens, Donna M.
APPLICANT: Shattuck, Jacques
APPLICANT: Emi, Mitsuru
APPLICANT: Nakamura, Yusuke
APPLICANT: Dutocher, Francine
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESS: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,002
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.

```

```

; REGISTRATION NUMBER: 28,957
; REFERENCE/DOCKET NUMBER: 24884-109347
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-962-4810
; TELEFAX: 202-962-8300
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1863 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-487-002-2

```

```

Query Match          99.9%; Score 9642; DB 1; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

QY 1 MDLSALRYEYQNVINAMOKILIECPICELIEPEVSTKCDHIFCKFCMLKILNOKKPSQ 60
Db 1 MDLSALRYEYQNVINAMOKILIECPICELIEPEVSTKCDHIFCKFCMLKILNOKKPSQ 60
QY 61 CPLCKNDITKRSLOESTFVSQVYBELKIIICAPQIDPGLFVANSYNRAKKENSPBELKD 120
Db 61 CPLCKNDITKRSLOESTFVSQVYBELKIIICAPQIDPGLFVANSYNRAKKENSPBELKD 120
QY 121 EYSIIQSMGYRNRAKRLIOSEPENPSLOETSLVOLSMLGVTRTLTKRIOPQKTSVYI 180
Db 121 EYSIIQSMGYRNRAKRLIOSEPENPSLOETSLVOLSMLGVTRTLTKRIOPQKTSVYI 180
QY 181 ELGSDSSDDYVNAKATYCSVQDOELIQTTPQGTREIDISAKKACERSETDVTNTEHQ 240
Db 181 ELGSDSSDDYVNAKATYCSVQDOELIQTTPQGTREIDISAKKACERSETDVTNTEHQ 240
QY 241 PSNNDLNTTEKRAARHEKTYOGSSVSNLHYEPCGTNTHASLOHENSLLTKRDMNVE 300
Db 241 PSNNDLNTTEKRAARHEKTYOGSSVSNLHYEPCGTNTHASLOHENSLLTKRDMNVE 300
QY 301 KAEFCNKSQOPGLARSQHNRAWSKETCNDRTPTSTKQVLDNADPLCEKRENNKOLPC 360
Db 301 KAEFCNKSQOPGLARSQHNRAWSKETCNDRTPTSTKQVLDNADPLCEKRENNKOLPC 360
QY 361 SENPDRTDVPWITLANSIOKVNMFSQSDLLSDSDSHGSESNNAKVADVLDVNEVD 420
Db 361 SENPDRTDVPWITLANSIOKVNMFSQSDLLSDSDSHGSESNNAKVADVLDVNEVD 420
QY 421 EYSGSSEKIDLLADPHALICKSERVSKSVESNIEDKIFGKYRKKASLPNLSHTEN 480
Db 421 EYSGSSEKIDLLADPHALICKSERVSKSVESNIEDKIFGKYRKKASLPNLSHTEN 480
QY 481 LIIGAFVTEPQIOERPLTNLKKRRRPTSGLHPDEFIKKADLAVOQTPMINOGTNOTE 540
Db 481 LIIGAFVTEPQIOERPLTNLKKRRRPTSGLHPDEFIKKADLAVOQTPMINOGTNOTE 540
QY 541 ONGOVMTNTNGHEKTKTGDSTIONEKNPNPLESEKESAKRTAEPRISSISNMELELN 600
Db 541 ONGOVMTNTNGHEKTKTGDSTIONEKNPNPLESEKESAKRTAEPRISSISNMELELN 600
QY 601 HNSKAPKKNRRLRRKSTPHIALLVYRNLPNCTELQIDSCSSSEETKRRKYQMPY 660
Db 601 HNSKAPKKNRRLRRKSTPHIALLVYRNLPNCTELQIDSCSSSEETKRRKYQMPY 660
QY 661 RHSRNLQMEGKEPATGAKKSNKPNQTSKRHSDPTPELKLTNAPGSPFKCSNTSELKE 720
Db 661 RHSRNLQMEGKEPATGAKKSNKPNQTSKRHSDPTPELKLTNAPGSPFKCSNTSELKE 720
QY 721 FVNPSPREEKEKLELVYKVSNNABEDKDLMSGERVLQTERVESSSISLVYGTGYGQ 780
Db 721 FVNPSPREEKEKLELVYKVSNNABEDKDLMSGERVLQTERVESSSISLVYGTGYGQ 780
QY 781 ESISLLEVSTLGRKATPEPNKCVSOGCAFENPKGLIHGCSKDNNDNDEGFRPYLGHEVNS 840
Db 781 ESISLLEVSTLGRKATPEPNKCVSOGCAFENPKGLIHGCSKDNNDNDEGFRPYLGHEVNS 840

```



```

Db      61  CPLICNDITKRSLOESTRFSQVLEELKICAFQOLDTGLEVANSYFAKKNENSPHELD 120
Qy      121  EVSIIOSMGYRNRARLQSEPNPSLOETSLSVOLSNLGYRTLRKTRIPORQTSYI 180
Db      121  EVSIIOSMGYRNRARLQSEPNPSLOETSLSVOLSNLGYRTLRKTRIPORQTSYI 180
Qy      181  ELGSDSEDTVWKATYCSVGOELQITPOGTRDEISLDSAKKACESEDTVTENHQ 240
Db      181  ELGSDSEDTVWKATYCSVGOELQITPOGTRDEISLDSAKKACESEDTVTENHQ 240
Qy      241  PSNNDLNTTEKRAARHPEKYOGSSVNLHVEPCGNTNASSLOHBNSSLITKDRMNE 300
Db      241  PSNNDLNTTEKRAARHPEKYOGSSVNLHVEPCGNTNASSLOHBNSSLITKDRMNE 300
Qy      301  KAECNKSOPGLARSOHNRNAGSKETCNDRTPTSEKKVDNADPLCERKEMNOKLPC 360
Db      301  KAECNKSOPGLARSOHNRNAGSKETCNDRTPTSEKKVDNADPLCERKEMNOKLPC 360
Qy      361  SENPREDTVPWITLNSIIOKVNEWFSRSDDELGSDSDHGESNAKVAADVLNEDV 420
Db      361  SENPREDTVPWITLNSIIOKVNEWFSRSDDELGSDSDHGESNAKVAADVLNEDV 420
Qy      421  EYSGSSEKIDILASPHALICKSRVHSKSVESNIEDIKFEKTYRKKASLPLNLSHYEN 480
Db      421  EYSGSSEKIDILASPHALICKSRVHSKSVESNIEDIKFEKTYRKKASLPLNLSHYEN 480
Qy      481  LIIGAFVTEPOIIIOERPLTNLKRKRRTSGLHPEDFIKKADLAVOKTPEMINOQNOTE 540
Db      481  LIIGAFVTEPOIIIOERPLTNLKRKRRTSGLHPEDFIKKADLAVOKTPEMINOQNOTE 540
Qy      541  ONGOVMTNNGSHENKTKGDSIONEKNPNJESLEKESAFKTKAPJISSISNMELEINI 600
Db      541  ONGOVMTNNGSHENKTKGDSIONEKNPNJESLEKESAFKTKAPJISSISNMELEINI 600
Qy      601  HNSAPKKNRLBRKSTRHIALELYVRNLSPPCTELQIDSCSSSEIKKKKNOMPV 660
Db      601  HNSAPKKNRLBRKSTRHIALELYVRNLSPPCTELQIDSCSSSEIKKKKNOMPV 660
Qy      661  RHRNLOIMEGKEPATGAKKSNKPNEQTSKRHDSTPELKLITNAPGFTKCSNSELKE 720
Db      661  RHRNLOIMEGKEPATGAKKSNKPNEQTSKRHDSTPELKLITNAPGFTKCSNSELKE 720
Qy      721  FVNSLSPREKEKELEYKVSNNADPDMLSGRVLQTERSVSSSISLVPGLDYGTO 780
Db      721  FVNSLSPREKEKELEYKVSNNADPDMLSGRVLQTERSVSSSISLVPGLDYGTO 780
Qy      781  ESISLLEYSTLGAKTEBPNKCVSOCAAFENPKGLIHGSKDNDRNTEBGFYPLGHEVNS 840
Db      781  ESISLLEYSTLGAKTEBPNKCVSOCAAFENPKGLIHGSKDNDRNTEBGFYPLGHEVNS 840
Qy      841  RETSIEKESELDAYLONTEFKVSKROSFALFSNFGNAEEBCATFSAHSGILKQSPRYT 900
Db      841  RETSIEKESELDAYLONTEFKVSKROSFALFSNFGNAEEBCATFSAHSGILKQSPRYT 900
Qy      901  FECOKRENGKNSNITKPVQTVNITAGFPVQKDKRVYNAKCSIKRGSFCLSSQORG 960
Db      901  FECOKRENGKNSNITKPVQTVNITAGFPVQKDKRVYNAKCSIKRGSFCLSSQORG 960
Qy      961  NETGLITPNKHGLONRYRIPPLPIKSFVTKCKKNLENFEEHSPREKMGNEIP 1020
Db      961  NETGLITPNKHGLONRYRIPPLPIKSFVTKCKKNLENFEEHSPREKMGNEIP 1020
Qy      1021  STVSTSRNNIRENVFEASSNINEVGSSSTNEVGSSINELIGSSDENIQAELGRNRGKL 1080
Db      1021  STVSTSRNNIRENVFEASSNINEVGSSSTNEVGSSINELIGSSDENIQAELGRNRGKL 1080
Qy      1081  NAMRLGVLDPYVYKOSLPGSNCHPEIKKOEYEVQTVNTDSPYISINLQOPMGSS 1140
Db      1081  NAMRLGVLDPYVYKOSLPGSNCHPEIKKOEYEVQTVNTDSPYISINLQOPMGSS 1140
Qy      1141  HASQVCSFETPDDLDDEIKEDTSPAENDIKESSAVFSKSVQKELSRSPFHTHTLAQ 1200

```

```

Db      1141  HASQVCSFETPDDLDDEIKEDTSPAENDIKESSAVFSKSVQKELSRSPFHTHTLAQ 1200
Qy      1201  GYRRRAKLTSESEENLSSSEDEBELPCFQHLILGKYNNTIPSOSTRSTYATCISANTENL 1260
Db      1201  GYRRRAKLTSESEENLSSSEDEBELPCFQHLILGKYNNTIPSOSTRSTYATCISANTENL 1260
Qy      1261  LSLKNSLNDCSNOVILARASOEHLSEETKCSASLFSQCSSELDLANTNTODPFLIGS 1320
Db      1261  LSLKNSLNDCSNOVILARASOEHLSEETKCSASLFSQCSSELDLANTNTODPFLIGS 1320
Qy      1321  SKOMRHOSESGVGLSDKEVSDDEBECTGLEENNOBOSMDSNLGPAAGCSESTVSE 1380
Db      1321  SKOMRHOSESGVGLSDKEVSDDEBECTGLEENNOBOSMDSNLGPAAGCSESTVSE 1380
Qy      1381  DCSGSSSDILITTOQRTMOHNLKIQOEAELEAVLEOHGSPSSYSTIISDSALE 1440
Db      1381  DCSGSSSDILITTOQRTMOHNLKIQOEAELEAVLEOHGSPSSYSTIISDSALE 1440
Qy      1441  DLNRPEQSTSEKAVLTSQKSEEPYSONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
Db      1441  DLNRPEQSTSEKAVLTSQKSEEPYSONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
Qy      1501  CPSLDDRWYMHSCSGSLONRNYPSOEELIKVVDVEEOLESGPHDLTETSYLPRODLEG 1560
Db      1501  CPSLDDRWYMHSCSGSLONRNYPSOEELIKVVDVEEOLESGPHDLTETSYLPRODLEG 1560
Qy      1561  TPYLESGISLFDPESDPESDRAPEASRVNIPSSSALVKPOLKVAESAQSPAAHNT 1620
Db      1561  TPYLESGISLFDPESDPESDRAPEASRVNIPSSSALVKPOLKVAESAQSPAAHNT 1620
Qy      1621  DTAGYNAMEESVSRKPELTAFTERVYKRMSSVVSGLTPEEFMLVYKFAKHHITLNL 1680
Db      1621  DTAGYNAMEESVSRKPELTAFTERVYKRMSSVVSGLTPEEFMLVYKFAKHHITLNL 1680
Qy      1681  TEETHVYMKDAFVOCRTLYFLGJAGKVVVSYSVMWOSIKERKMLNEHOFERGVY 1740
Db      1681  TEETHVYMKDAFVOCRTLYFLGJAGKVVVSYSVMWOSIKERKMLNEHOFERGVY 1740
Qy      1741  VNGRNOGPKRARSODRKIFRGLEICCYGFTNMPDOLEMMVYOLGASVARELSFTL 1800
Db      1741  VNGRNOGPKRARSODRKIFRGLEICCYGFTNMPDOLEMMVYOLGASVARELSFTL 1800
Qy      1801  GTGVHPYVQPDAMTEBNGFHAIGOMCEAPVYTRREWVLDVALYOCOEIDLYLIPDIP 1860
Db      1801  GTGVHPYVQPDAMTEBNGFHAIGOMCEAPVYTRREWVLDVALYOCOEIDLYLIPDIP 1860
Qy      1861  SHY 1863
Db      1861  SHY 1863

```

```

RESULT 8
US-08-488-011B-2
: Sequence 2, Application US/08488011B
: Patent No. 5753441
: GENERAL INFORMATION:
: APPLICANT: Skolnick, Mark H.
: APPLICANT: Goldgar, David E.
: APPLICANT: Miki, Yoshio
: APPLICANT: Swenson, Jeff
: APPLICANT: Kamp, Alexander
: APPLICANT: Harshman, Keith D.
: APPLICANT: Shattuck-Eidens, Donna M.
: APPLICANT: Tavtigian, Sean V.
: APPLICANT: Wiseman, Roger W.
: APPLICANT: Futreal, P. Andrew
: TITLE OF INVENTION: 17q Linked Breast and Ovarian Cancer
: TITLE OF INVENTION: Susceptibility Gene
: NUMBER OF SEQUENCES: 85
: CORRESPONDENCE ADDRESSES:
: ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
: STREET: 1201 New York Avenue, N.W., Suite 1000
: CITY: Washington

```

STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,011B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Imnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-488-011B-2

Query Match 99.9%; Score 9642; DB 1; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MDLSALRYEEVQVONVINAMQKILIECPICIELEIKPEVSTKCDHIFCKFCMKILNOKKGSQ 60
DB 1 MDLSALRYEEVQVONVINAMQKILIECPICIELEIKPEVSTKCDHIFCKFCMKILNOKKGSQ 60
QY 61 CPICNDITKRSLOSTRFSQVLELLKTIICAFOLDGTGLVANSYNFAKKENSPFHLKD 120
DB 61 CPICNDITKRSLOSTRFSQVLELLKTIICAFOLDGTGLVANSYNFAKKENSPFHLKD 120
QY 121 EYSIIOSMGYNRRARLQSEPEPNSLOETSLVQSLMIGVRLTQRTQIOPKTSYVI 180
DB 121 EYSIIOSMGYNRRARLQSEPEPNSLOETSLVQSLMIGVRLTQRTQIOPKTSYVI 180
QY 181 EIGSDSSEDTYVNAKATYCSVGOELQITPQGTREIISLDSAKKAACESEDTVTTEHHQ 240
DB 181 EIGSDSSEDTYVNAKATYCSVGOELQITPQGTREIISLDSAKKAACESEDTVTTEHHQ 240
QY 241 PSNNDLNTEKRAARHPEKVOGSSVSNLHVEPCGTNHASSLOHENSLLTKRRMVE 300
DB 241 PSNNDLNTEKRAARHPEKVOGSSVSNLHVEPCGTNHASSLOHENSLLTKRRMVE 300
QY 301 KAEFCNKSKOPGLIARSHNRNAGSKETCNDRTPTSTKRVLDNADPLCEKREMNKOKLPC 360
DB 301 KAEFCNKSKOPGLIARSHNRNAGSKETCNDRTPTSTKRVLDNADPLCEKREMNKOKLPC 360
QY 361 SENPRTEDVPMITLNSIIQKVNEMFSSRDELIGSDSDSHDESESNARVADVLNEDV 420
DB 361 SENPRTEDVPMITLNSIIQKVNEMFSSRDELIGSDSDSHDESESNARVADVLNEDV 420

QY 421 EYSSSEKIDLLASDPHEALICKSERVSHSVESNIEDIKPKGTYRKKAJLJPNLSHVEN 480
DB 421 EYSSSEKIDLLASDPHEALICKSERVSHSVESNIEDIKPKGTYRKKAJLJPNLSHVEN 480
QY 481 LIIGAFVTEPQIIOBRPLTNKLRKRRTSGLPEDFTKKADLAVOKTPMINTGNTOTE 540
DB 481 LIIGAFVTEPQIIOBRPLTNKLRKRRTSGLPEDFTKKADLAVOKTPMINTGNTOTE 540
QY 541 QNGQVMTTNSGHEKKTGDSIQNEKNPPIESLEKESAFKTAAPRISSISIMLEELNI 600
DB 541 QNGQVMTTNSGHEKKTGDSIQNEKNPPIESLEKESAFKTAAPRISSISIMLEELNI 600
QY 601 HNSKAPKKNRLRRKSTTHIALELVYRNLSPPNCTELOIDSCSSSEIKKKKNQMPV 660
DB 601 HNSKAPKKNRLRRKSTTHIALELVYRNLSPPNCTELOIDSCSSSEIKKKKNQMPV 660
QY 661 HRSRNLQMEGKEPATGAKSKNKPNEQTSKRHSDTPPELKLTNAPGFTKCSNTSELKE 720
DB 661 HRSRNLQMEGKEPATGAKSKNKPNEQTSKRHSDTPPELKLTNAPGFTKCSNTSELKE 720
QY 721 FVNPSPREBEKEELETYKVSNNADPMDLMSGERVLOTERSVSSISLVPGTDTGTQ 780
DB 721 FVNPSPREBEKEELETYKVSNNADPMDLMSGERVLOTERSVSSISLVPGTDTGTQ 780
QY 781 ESIISLEVSTLGAKTEBNKCVSOCAAFENPGLHGGSKDNRRNDEGPKYPLGHEVNS 840
DB 781 ESIISLEVSTLGAKTEBNKCVSOCAAFENPGLHGGSKDNRRNDEGPKYPLGHEVNS 840
QY 841 RETSIEMESELDAOYLONTFKVSKROSFALSNNGNNEECATSAHSGSLKQSPVYT 900
DB 841 RETSIEMESELDAOYLONTFKVSKROSFALSNNGNNEECATSAHSGSLKQSPVYT 900
QY 901 FECEQKEENOGKNESNIKPVQTVNTAGPVYVGOKDPVDNAKCSIKGSRFCLSSQFRG 960
DB 901 FECEQKEENOGKNESNIKPVQTVNTAGPVYVGOKDPVDNAKCSIKGSRFCLSSQFRG 960
QY 961 NETGLITNKHGLLONPRIPLPIKSPVTKCKKNLLEEFHSHSPPEMKNENIP 1020
DB 961 NETGLITNKHGLLONPRIPLPIKSPVTKCKKNLLEEFHSHSPPEMKNENIP 1020
QY 1021 STVSTISRNNIRENFKAASSNINEVSSSTNEVSSINEIGSSDENIOAELGRRRGPKL 1080
DB 1021 STVSTISRNNIRENFKAASSNINEVSSSTNEVSSINEIGSSDENIOAELGRRRGPKL 1080
QY 1081 NAMRLGVLOPEVYKQSLPGSNCKHPEIKQIEYEEVQTVNTDFSPYLISDMLQOPMGS 1140
DB 1081 NAMRLGVLOPEVYKQSLPGSNCKHPEIKQIEYEEVQTVNTDFSPYLISDMLQOPMGS 1140
QY 1141 HASQVCSFPPDLDLDGELKEDTSPAENDIKESSAVFSKSVOKGELSRSPFTHHQAQ 1200
DB 1141 HASQVCSFPPDLDLDGELKEDTSPAENDIKESSAVFSKSVOKGELSRSPFTHHQAQ 1200
QY 1201 GYRRGAKRLLESSEENIASEDELPCFQHLILGKVNINISQSTRHSTVATECLSKNTEENL 1260
DB 1201 GYRRGAKRLLESSEENIASEDELPCFQHLILGKVNINISQSTRHSTVATECLSKNTEENL 1260
QY 1261 LSLKNSLNDCSNOVILAAASQBHLSEETKCSASLFSQCSLEDLTANTWTQDFLIGS 1320
DB 1261 LSLKNSLNDCSNOVILAAASQBHLSEETKCSASLFSQCSLEDLTANTWTQDFLIGS 1320
QY 1321 SKOMRHOSESGVIGLDEKELVSDDERGTGLENNQEOHSDMSNNGEASGCESETVSE 1380
DB 1321 SKOMRHOSESGVIGLDEKELVSDDERGTGLENNQEOHSDMSNNGEASGCESETVSE 1380
QY 1381 DCSGLSSQSDILITTOQRTMOHNLKLOEAAELAVLEQSGSQSNYPSTIISSSALE 1440
DB 1381 DCSGLSSQSDILITTOQRTMOHNLKLOEAAELAVLEQSGSQSNYPSTIISSSALE 1440
QY 1441 DLRNPEOSTSEKAVILTSQKSSSEYPISONPEGLSADKFEVSAADSSSTSKNKEGVERSPPSK 1500
DB 1441 DLRNPEOSTSEKAVILTSQKSSSEYPISONPEGLSADKFEVSAADSSSTSKNKEGVERSPPSK 1500


```

QY 1501 CPSIDDDMYHSCSGSLQNNRYPSOEELIKVYVDEEQLBESGPHDLTETSYLPRODLEG 1560
DB 1501 CPSIDDDMYHSCSGSLQNNRYPSOEELIKVYVDEEQLBESGPHDLTETSYLPRODLEG 1560
QY 1561 TPYIESGSLSPDPESDPESDRAPESARVGNIPSTSLAKVPOLKVAESQSPAATHT 1620
DB 1561 TPYIESGSLSPDPESDPESDRAPESARVGNIPSTSLAKVPOLKVAESQSPAATHT 1620
QY 1621 DTAGYNAMEESVSREKPELTASTERNKRMKSMVYSGLPPEERMLYKARKHITLTLNLI 1680
DB 1621 DTAGYNAMEESVSREKPELTASTERNKRMKSMVYSGLPPEERMLYKARKHITLTLNLI 1680
QY 1681 TEETTHVYMKDAEFVCERTIKYFLGIAGKMWVSYFWVTOSIKERKMLNEHDEFVSGDV 1740
DB 1681 TEETTHVYMKDAEFVCERTIKYFLGIAGKMWVSYFWVTOSIKERKMLNEHDEFVSGDV 1740
QY 1741 VNGRNHOGPKRARSODKIRFGLIEICCYGPTNMPDQLEMMVOLGASVYKELSSFTL 1800
DB 1741 VNGRNHOGPKRARSODKIRFGLIEICCYGPTNMPDQLEMMVOLGASVYKELSSFTL 1800
QY 1801 GTGVHPIVYVQPDAMTEDNCFHAIQOMCEAPVYTEREVLDSYALYQCELDYLLIPQIPH 1860
DB 1801 GTGVHPIVYVQPDAMTEDNCFHAIQOMCEAPVYTEREVLDSYALYQCELDYLLIPQIPH 1860
QY 1861 SHY 1863
DB 1861 SHY 1863

RESULT 9
US-08-850-727-2
Sequence 2, Application US/08850727
Patent No. 6162897
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/850,727
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/483,554
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:

```

```

APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
US-08-850-727-2

Query Match          99.9%; Score 9642; DB 4; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MDLSALRYEEVQYVYINAMOKTLECPICLELKEPVSTKCDHIFCKPOMKTLNOKKGPQ 60
DB 1 MDLSALRYEEVQYVYINAMOKTLECPICLELKEPVSTKCDHIFCKPOMKTLNOKKGPQ 60
QY 61 CPLCKNDITKRSLOESTRFESOLVYELKIIICAFOLDTGLRYANSYNPAKKENSPHELD 120
DB 61 CPLCKNDITKRSLOESTRFESOLVYELKIIICAFOLDTGLRYANSYNPAKKENSPHELD 120
QY 121 EVSIISQMGYNNRAKRLLOSEPENPSLOETSLVYOLSNIQTVTLTKORIOPQKTSYVI 180
DB 121 EVSIISQMGYNNRAKRLLOSEPENPSLOETSLVYOLSNIQTVTLTKORIOPQKTSYVI 180
QY 181 ELGSDSSPDYNNKATYCSVGQELQTTPOGTREISLDSAKKACCFSTVDYTNNEHQ 240
DB 181 ELGSDSSPDYNNKATYCSVGQELQTTPOGTREISLDSAKKACCFSTVDYTNNEHQ 240
QY 181 ELGSDSSPDYNNKATYCSVGQELQTTPOGTREISLDSAKKACCFSTVDYTNNEHQ 240
DB 181 ELGSDSSPDYNNKATYCSVGQELQTTPOGTREISLDSAKKACCFSTVDYTNNEHQ 240
QY 241 PSNNDLNTTEKRAERHPEKTYQSSVSNLHVEPGTNTNASSLOHENSILLTKRDMAVE 300
DB 241 PSNNDLNTTEKRAERHPEKTYQSSVSNLHVEPGTNTNASSLOHENSILLTKRDMAVE 300
QY 301 KAFCNKSQOGIARSOHNRWAGSKETCNDRRPTSTEEKYVLDNADPLCERKENNKKLPC 360
DB 301 KAFCNKSQOGIARSOHNRWAGSKETCNDRRPTSTEEKYVLDNADPLCERKENNKKLPC 360
QY 361 SENRDTEDVWITLNSIQKVNWFERSRDELLGSDSDSHGSESNAKYADVLDVINEVD 420
DB 361 SENRDTEDVWITLNSIQKVNWFERSRDELLGSDSDSHGSESNAKYADVLDVINEVD 420
QY 421 EYSGSSEKIDLLASDPHEALICKSERVHASKVESNIEDKIFGKYRKKAISPLSVHTEN 480
DB 421 EYSGSSEKIDLLASDPHEALICKSERVHASKVESNIEDKIFGKYRKKAISPLSVHTEN 480
QY 481 LIIGAFYTEPQIIQERPLTKLKRKRRTSGLHPDEFIKKADIAVOKTPEMINOQTQTE 540
DB 481 LIIGAFYTEPQIIQERPLTKLKRKRRTSGLHPDEFIKKADIAVOKTPEMINOQTQTE 540
QY 541 QNGVNMNTNSGHENKTKGDSIQNEKNPNPTESELESKAEKTAEPYISSISIMELINI 600
DB 541 QNGVNMNTNSGHENKTKGDSIQNEKNPNPTESELESKAEKTAEPYISSISIMELINI 600
QY 601 HNSKAPKKNRLRKRKSTRHIALEIVYSRMLSPNCTEQLDSCSSSEETKKKKYQMPV 660
DB 601 HNSKAPKKNRLRKRKSTRHIALEIVYSRMLSPNCTEQLDSCSSSEETKKKKYQMPV 660
QY 661 RHSRNLQIMEGKEPATGAKKSNKPNQTSKRHSDTFPELKLTNADGFTKCSNTEKE 720
DB 661 RHSRNLQIMEGKEPATGAKKSNKPNQTSKRHSDTFPELKLTNADGFTKCSNTEKE 720
QY 721 FVNPISLPREKEKELETVKYVSNNAEDPKDMLSGERYLOTREKVESSISILVPGTDYGTQ 780
DB 721 FVNPISLPREKEKELETVKYVSNNAEDPKDMLSGERYLOTREKVESSISILVPGTDYGTQ 780

```

```

Db      721 FVNPSPREEKEEKLETVKVSNNADPKDMLSGERVLTQTERSVSSSISLVPGDYQ 780
QY      781 ESISLLEVSTLCKATEPNKCVSOCAAFENPKGLHGCSKDNRNTEGFKYVLGHEVNH 840
Db      781 ESISLLEVSTLCKATEPNKCVSOCAAFENPKGLHGCSKDNRNTEGFKYVLGHEVNH 840
QY      841 RETSIEMESELDAQYLONTFKVSKROSFALFSPNGNAEECATSAHSGSLKQSPKVT 900
Db      841 RETSIEMESELDAQYLONTFKVSKROSFALFSPNGNAEECATSAHSGSLKQSPKVT 900
QY      901 FECEQKEENOGKNESNIKPVQVTNITAGFPVVGQKDKPDVNAKCSIKGSGRCLSSQFRG 960
Db      901 FECEQKEENOGKNESNIKPVQVTNITAGFPVVGQKDKPDVNAKCSIKGSGRCLSSQFRG 960
QY      961 NETGLITPNKRGHLLONPRIPPLPKSFVKTKCKKNLLENFEEHSHSPREKMGNEINP 1020
Db      961 NETGLITPNKRGHLLONPRIPPLPKSFVKTKCKKNLLENFEEHSHSPREKMGNEINP 1020
QY      1021 STVSTISRNNTIRENFKEASSNINEVGSSTNEVGSSINETSSENIOAELGRRGPKL 1080
Db      1021 STVSTISRNNTIRENFKEASSNINEVGSSTNEVGSSINETSSENIOAELGRRGPKL 1080
QY      1081 NAMRLGYLOPEVYKQSLPGSNCKHPKIKOYEVEVOVTNTDFSPYLISDMLQPMGSS 1140
Db      1081 NAMRLGYLOPEVYKQSLPGSNCKHPKIKOYEVEVOVTNTDFSPYLISDMLQPMGSS 1140
QY      1141 HASOVCSETPDDLDDGELKEPTSFANDIKESSAVFSKSVOKGELSSPFFTHLQAQ 1200
Db      1141 HASOVCSETPDDLDDGELKEPTSFANDIKESSAVFSKSVOKGELSSPFFTHLQAQ 1200
QY      1201 GYRGAKKLSESEMLSEDELPFOHLLFGKVNIPSOFSRHSHTVATECLSKTEENL 1260
Db      1201 GYRGAKKLSESEMLSEDELPFOHLLFGKVNIPSOFSRHSHTVATECLSKTEENL 1260
QY      1261 LSLKNSLDCSNQVILAAASQEHLSSETKCSASLFSQCSLEEDLTANTNTQDPFLIGS 1320
Db      1261 LSLKNSLDCSNQVILAAASQEHLSSETKCSASLFSQCSLEEDLTANTNTQDPFLIGS 1320
QY      1321 SKOMHOSESGVIGSDKEIVSDDERGTGLEENNOEBOQSDMSNGEASGCESTSVSE 1380
Db      1321 SKOMHOSESGVIGSDKEIVSDDERGTGLEENNOEBOQSDMSNGEASGCESTSVSE 1380
QY      1381 DCSGSSOSDILITTOQRDTMOHNLKLOEAMAEVLEQHOHQSGSNSYPTSISSALE 1440
Db      1381 DCSGSSOSDILITTOQRDTMOHNLKLOEAMAEVLEQHOHQSGSNSYPTSISSALE 1440
QY      1441 DLRNPEQSTSEKAVLTSQKSEYPISONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
Db      1441 DLRNPEQSTSEKAVLTSQKSEYPISONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
QY      1501 CPSLDDRWYMHSCSSLONNRNPSEBELIKYVDVEQOLESGPDLTETSLPQDLEB 1560
Db      1501 CPSLDDRWYMHSCSSLONNRNPSEBELIKYVDVEQOLESGPDLTETSLPQDLEB 1560
QY      1561 TPYLESGISLFSDDPESPDSEDRAPESARVGNIPSTSAKLPOLKVAESAQSPAATHT 1620
Db      1561 TPYLESGISLFSDDPESPDSEDRAPESARVGNIPSTSAKLPOLKVAESAQSPAATHT 1620
QY      1621 DTAGYNAMEESVSREKPELTAFTERVNRMSVNVGSLTPEEFMLVYKFAKKHHTLTNLI 1680
Db      1621 DTAGYNAMEESVSREKPELTAFTERVNRMSVNVGSLTPEEFMLVYKFAKKHHTLTNLI 1680
QY      1681 TEETHHYVMTDAEVCERTLKYFLGIAGKMWVSYFWVTOSIKRKNLNEHDFEVRD 1740
Db      1681 TEETHHYVMTDAEVCERTLKYFLGIAGKMWVSYFWVTOSIKRKNLNEHDFEVRD 1740
QY      1741 VNGRNHQGPARRAESODRKIFRGLEICCYGPTNPTQLEMWOLCGASVYKELSSFTL 1800
Db      1741 VNGRNHQGPARRAESODRKIFRGLEICCYGPTNPTQLEMWOLCGASVYKELSSFTL 1800
QY      1801 GTGVHPYVOPDAWTEBNGFHAIGQMCAPVYTRRWVLDVALYQCELDTYLLIPIQPH 1860

```

```

Db      1801 GTGVHPYVOPDAWTEBNGFHAIGQMCAPVYTRRWVLDVALYQCELDTYLLIPIQPH 1860
QY      1861 SHY 1863
Db      1861 SHY 1863

RESULT 10
PCT-US95-10202-2
; Sequence 2, Application PC/TUS9510202
; GENERAL INFORMATION:
; APPLICANT: Shattuck-Eidens, Donna M.
; APPLICANT: Simard, Jacques
; APPLICANT: Eml, Mitsuru
; APPLICANT: Nakamura, Yusuke
; APPLICANT: Durocher, Francine
; TITLE OF INVENTION: In Vivo Mutations and Polymorphisms
; TITLE OF INVENTION: In the 17q-Linked Breast and Ovarian Cancer
; NUMBER OF SEQUENCES: 85
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
; STREET: 1201 New York Avenue, N.W., Suite 1000
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: PCT/US95/10202
; FILING DATE:
; CLASSIFICATION:
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US
; FILING DATE: 07-JUN-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/409,305
; FILING DATE: 24-MAR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/348,824
; FILING DATE: 29-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08-308,104
; FILING DATE: 16-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/300,266
; FILING DATE: 02-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/289,221
; FILING DATE: 12-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Ihnen, Jeffrey L.
; REGISTRATION NUMBER: 28,957
; REFERENCE/DOCKET NUMBER: 24884-109347
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-962-4810
; TELEFAX: 202-962-8300
; INFORMATION FOR SEQ ID NO: 2:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 1863 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; PCT-US95-10202-2

Query Match      99.9%; Score 9642; DB 5; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

QY 1 MDLSALRVEEYQVNTINAMOKIIECPICELIIEKPYSTKCDHIFCKFCMLKLLNOKKPSQ 60
Db 1 MDLSALRVEEYQVNTINAMOKIIECPICELIIEKPYSTKCDHIFCKFCMLKLLNOKKPSQ 60
QY 61 CPLKNDITKRSLOESTRFSOLVEELLKTIICAFOLDGTGEVANSYNPAKKNENSPHLD 120
Db 61 CPLKNDITKRSLOESTRFSOLVEELLKTIICAFOLDGTGEVANSYNPAKKNENSPHLD 120
QY 121 EVSIIOSMGYNRAKRLLOSEPENSLQETSLSVOLSNLGVRTIKTORIOPKTSYVI 180
Db 121 EVSIIOSMGYNRAKRLLOSEPENSLQETSLSVOLSNLGVRTIKTORIOPKTSYVI 180
QY 181 ELGSDSSFDYVNTKATYCVGDOELQITPOGTRDEISLDSAKAACSESTVYTNHHQ 240
Db 181 ELGSDSSFDYVNTKATYCVGDOELQITPOGTRDEISLDSAKAACSESTVYTNHHQ 240
QY 241 PSNNDLNTTEKRAERHPEKTYOGSSVSNLHVEPCGNTNHAASLOHENSLLTKRMANE 300
Db 241 PSNNDLNTTEKRAERHPEKTYOGSSVSNLHVEPCGNTNHAASLOHENSLLTKRMANE 300
QY 301 KAEFCNKSQOPGLARSOHNRWAGSKETCNDRTPTSEKRVLDNLADPLCERKEMNKOKLPC 360
Db 301 KAEFCNKSQOPGLARSOHNRWAGSKETCNDRTPTSEKRVLDNLADPLCERKEMNKOKLPC 360
QY 361 SENRDPEDVPMITLNSIOKVNEFSSRDELLGSDSDHDSSESNAKAVDYLDVLEND 420
Db 361 SENRDPEDVPMITLNSIOKVNEFSSRDELLGSDSDHDSSESNAKAVDYLDVLEND 420
QY 421 EYSSSEKIDLLASDPHALICKSERVHASKSVESNIEDKIFGKYTKKASLPNLSHYEN 480
Db 421 EYSSSEKIDLLASDPHALICKSERVHASKSVESNIEDKIFGKYTKKASLPNLSHYEN 480
QY 481 LIIGAVTEPQIIIOERPLTNKLKRRRPTSGLHPEDFIKKADLAVOKTPEMINOGTNO 540
Db 481 LIIGAVTEPQIIIOERPLTNKLKRRRPTSGLHPEDFIKKADLAVOKTPEMINOGTNO 540
QY 541 ONGOVMTNNGCHNKTKGDSIONEKNNPTEISLEKESAFKTAPESSISNMLELNI 600
Db 541 ONGOVMTNNGCHNKTKGDSIONEKNNPTEISLEKESAFKTAPESSISNMLELNI 600
QY 601 HNSKAPKKNRLRRKSTRIHALLELVYRNLSPPNCTELOQIDSCSSSEIKKKKNOMPV 660
Db 601 HNSKAPKKNRLRRKSTRIHALLELVYRNLSPPNCTELOQIDSCSSSEIKKKKNOMPV 660
QY 661 RHSNRLQMEGKEPATGAKKSNKPNEQTSKRHDSDTPELKLUTNAPGSGFTKCSNTSEKE 720
Db 661 RHSNRLQMEGKEPATGAKKSNKPNEQTSKRHDSDTPELKLUTNAPGSGFTKCSNTSEKE 720
QY 721 FVNSPLPREKEEKLLEYKVSNNADPKDMLSGSRVLOTERSVSSSISLVPGTDYGTQ 780
Db 721 FVNSPLPREKEEKLLEYKVSNNADPKDMLSGSRVLOTERSVSSSISLVPGTDYGTQ 780
QY 781 ESISLLEVSTLGAKTEBPNKCVSACAPEPNKGLHSGSKDNRNDEBGFYPLGHEVNS 840
Db 781 ESISLLEVSTLGAKTEBPNKCVSACAPEPNKGLHSGSKDNRNDEBGFYPLGHEVNS 840
QY 841 REISIEESELDAQYLONTFKVSROSFALESNGNAEEBCATFSAHSGSLKOSPKYT 900
Db 841 REISIEESELDAQYLONTFKVSROSFALESNGNAEEBCATFSAHSGSLKOSPKYT 900
QY 901 FECCOKRENGCKNSNITKPVQTVNITAGFPVVGQKDKRVDAKCSIKRGSFCLSSQRG 960
Db 901 FECCOKRENGCKNSNITKPVQTVNITAGFPVVGQKDKRVDAKCSIKRGSFCLSSQRG 960
QY 961 NENGLITPNKHGLLONFYPRIPLPFKISFVTKCKKNLLENFEEHSHPREMGNEPI 1020
Db 961 NENGLITPNKHGLLONFYPRIPLPFKISFVTKCKKNLLENFEEHSHPREMGNEPI 1020
QY 1021 STYSTIRNNIRENVEKEASSNINEVGSSSTNEVGSSINETGSSDENTQAEIGRNGPKL 1080
Db 1021 STYSTIRNNIRENVEKEASSNINEVGSSSTNEVGSSINETGSSDENTQAEIGRNGPKL 1080
QY 1081 NAMRLGVLOPEYVKOSLPGSNCKHPEIKKQYEYVQTVNTDPSPLYISDNLEQPMGSS 1140

```

```

Db 1081 NAMRLGVLOPEYVKOSLPGSNCKHPEIKKQYEYVQTVNTDPSPLYISDNLEQPMGSS 1140
QY 1141 HASOYCSFPPDLDLDDGEIKEDTSPAENDIKRESSAVFSKVOKELSRSPFTHHLAQ 1200
Db 1141 HASOYCSFPPDLDLDDGEIKEDTSPAENDIKRESSAVFSKVOKELSRSPFTHHLAQ 1200
QY 1201 GYRGAKKLESSEENLSSSEDELPCFOHLRGKVNNIIPSOSTRSHVATECLSKNTEBNL 1260
Db 1201 GYRGAKKLESSEENLSSSEDELPCFOHLRGKVNNIIPSOSTRSHVATECLSKNTEBNL 1260
QY 1261 ISLANSINDCSNOVILLAAASQEHLSSEETKCSASLFSQSGSELDLITANTQDPLIGS 1320
Db 1261 ISLANSINDCSNOVILLAAASQEHLSSEETKCSASLFSQSGSELDLITANTQDPLIGS 1320
QY 1321 SKOMRHOSESQGVGLSDEKELVSDDEERGTGLEENNQEBOSMDSNLGEAASGESETVSE 1380
Db 1321 SKOMRHOSESQGVGLSDEKELVSDDEERGTGLEENNQEBOSMDSNLGEAASGESETVSE 1380
QY 1381 DCSGLSSQSDILITTOQORDTMOHNLIKLOEMAELPAVLEOHGSOPSNSYPSIISDSALE 1440
Db 1381 DCSGLSSQSDILITTOQORDTMOHNLIKLOEMAELPAVLEOHGSOPSNSYPSIISDSALE 1440
QY 1441 DLRNPEOSTSEKAVLTSQKSESEYPISONPEGLSADKEFEVSADSTSKNKEPVERSSPSK 1500
Db 1441 DLRNPEOSTSEKAVLTSQKSESEYPISONPEGLSADKEFEVSADSTSKNKEPVERSSPSK 1500
QY 1501 CPSLDDRWYMHSCGSLDNRYNPSOEELIKVVDVEEQOLEBSGPHDLTETSYLPRODLEG 1560
Db 1501 CPSLDDRWYMHSCGSLDNRYNPSOEELIKVVDVEEQOLEBSGPHDLTETSYLPRODLEG 1560
QY 1561 TPYLESGISLSPDDPESDPSEDRAPESARVGNIPSSISALKVPOLKVAESQSPAANTT 1620
Db 1561 TPYLESGISLSPDDPESDPSEDRAPESARVGNIPSSISALKVPOLKVAESQSPAANTT 1620
QY 1621 DTAGYNAMEESVSRKPELTASTERYNKRMSVVSGLPBEFMYVFAKHHTLTNL 1680
Db 1621 DTAGYNAMEESVSRKPELTASTERYNKRMSVVSGLPBEFMYVFAKHHTLTNL 1680
QY 1681 TEETHYVVMKTDAEFVCEBRTLYFLGIAKGWVSYFVMTQSIKERKMLNEHDFEYGV 1740
Db 1681 TEETHYVVMKTDAEFVCEBRTLYFLGIAKGWVSYFVMTQSIKERKMLNEHDFEYGV 1740
QY 1741 VNGRNHOGPKRARESODRKIRGJEICCYGPTMPPTDQLEMYVOLCGASVYKELSSFTL 1800
Db 1741 VNGRNHOGPKRARESODRKIRGJEICCYGPTMPPTDQLEMYVOLCGASVYKELSSFTL 1800
QY 1801 GTGVHPVYVQPDAMTEDENGFHAIGOMCEAPVYVREAVLDSVALYOCQELDTYLIPIH 1860
Db 1801 GTGVHPVYVQPDAMTEDENGFHAIGOMCEAPVYVREAVLDSVALYOCQELDTYLIPIH 1860
QY 1861 SHY 1863
Db 1861 SHY 1863

```

RESULT 11
 PCT-US95-10203-2
 : Sequence 2, Application PC/TUS9510203

GENERAL INFORMATION:

APPLICANT: Skolnick, Mark H.
 APPLICANT: Goldgar, David E.
 APPLICANT: Miki, Yoshio
 APPLICANT: Swenson, Jeff
 APPLICANT: Kamb, Alexander
 APPLICANT: Harshman, Keith D.
 APPLICANT: Shattuck-Eidens, Donna M.
 APPLICANT: Tavtigian, Sean V.
 APPLICANT: Wiseman, Roger W.
 APPLICANT: Futreal, P. Andrew
 TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
 TITLE OF INVENTION: Susceptibility Gene
 NUMBER OF SEQUENCES: 85

CORRESPONDENCE ADDRESS:
 ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
 STREET: 1201 New York Avenue, N.W., Suite 1000
 CITY: Washington
 STATE: DC
 COUNTRY: USA
 ZIP: 20005
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: PCT/US95/10203
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US
 FILING DATE: 07-JUN-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/409,305
 FILING DATE: 24-MAR-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/348,824
 FILING DATE: 29-NOV-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08-308,104
 FILING DATE: 16-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/300,266
 FILING DATE: 02-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/289,221
 FILING DATE: 12-AUG-1994
 ATTORNEY/AGENT INFORMATION:
 NAME: Ihnen, Jeffrey L.
 REGISTRATION NUMBER: 28,957
 REFERENCE/DOCKET NUMBER: 24884-109347
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 202-962-4810
 TELEFAX: 202-962-8300
 INFORMATION FOR SEQ ID NO: 2:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 1863 amino acids
 TYPE: amino acid
 TOPOLOGY: linear
 MOLECULE TYPE: protein
 PCT-0595-10203-2

Query Match 99.9%; Score 9642; DB 5; Length 1863;

Best Local Similarity 99.9%; Pred. No. 0; Mismatches 1; Indels 0; Gaps 0;

Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
 QY 1 MDLSALRYEEVQVNIAMQKILCEPICLELKEPVSTKCDHIFCFCKMLKILNOKKGPQ 60
 DB 1 MDLSALRYEEVQVNIAMQKILCEPICLELKEPVSTKCDHIFCFCKMLKILNOKKGPQ 60
 QY 61 CPLCKNDITKRSLSQESTFVSQVLEELKLTICAFQDITLLEYANSTNFAKKENNSPEHLKD 120
 DB 61 CPLCKNDITKRSLSQESTFVSQVLEELKLTICAFQDITLLEYANSTNFAKKENNSPEHLKD 120
 QY 121 EVSIIOSKGYNRRAKRLQSEPEPNSLOETSLSVQSLMGTVNRTLRTQRIOPOKTSYI 180
 DB 121 EVSIIOSKGYNRRAKRLQSEPEPNSLOETSLSVQSLMGTVNRTLRTQRIOPOKTSYI 180
 QY 121 EVSIIOSKGYNRRAKRLQSEPEPNSLOETSLSVQSLMGTVNRTLRTQRIOPOKTSYI 180
 DB 121 EVSIIOSKGYNRRAKRLQSEPEPNSLOETSLSVQSLMGTVNRTLRTQRIOPOKTSYI 180
 QY 181 ELGSDSSEDTVNAKATYCSVGOELQITPOGTRDEISLDSAKKACERSETDVTNTEHQ 240
 DB 181 ELGSDSSEDTVNAKATYCSVGOELQITPOGTRDEISLDSAKKACERSETDVTNTEHQ 240
 QY 181 ELGSDSSEDTVNAKATYCSVGOELQITPOGTRDEISLDSAKKACERSETDVTNTEHQ 240
 DB 181 ELGSDSSEDTVNAKATYCSVGOELQITPOGTRDEISLDSAKKACERSETDVTNTEHQ 240
 QY 241 PSNNDLNTTEKRAERHPEKIQGSSVSLHVEPCGTNTHASSLOHENSLLITKDRNVE 300
 DB 241 PSNNDLNTTEKRAERHPEKIQGSSVSLHVEPCGTNTHASSLOHENSLLITKDRNVE 300
 QY 241 PSNNDLNTTEKRAERHPEKIQGSSVSLHVEPCGTNTHASSLOHENSLLITKDRNVE 300
 DB 241 PSNNDLNTTEKRAERHPEKIQGSSVSLHVEPCGTNTHASSLOHENSLLITKDRNVE 300

QY 301 KAEFCNKSGOPGLARSOHNRNAGSKETCNDRTPTSTKCYDLNADPLCERKEMNOKLPC 360
 DB 301 KAEFCNKSGOPGLARSOHNRNAGSKETCNDRTPTSTKCYDLNADPLCERKEMNOKLPC 360
 QY 361 SENPRDTEVPWITLNSIQKYNEMFSSDELLGSDSDHSGESSENAKAVADLVLEND 420
 DB 361 SENPRDTEVPWITLNSIQKYNEMFSSDELLGSDSDHSGESSENAKAVADLVLEND 420
 QY 421 EYSGSSEKIDLIASDPHEALICKSERVHSKSVESNIEDIKIGTYRKASLPNLSHTEN 480
 DB 421 EYSGSSEKIDLIASDPHEALICKSERVHSKSVESNIEDIKIGTYRKASLPNLSHTEN 480
 QY 481 LITGAFVTEPQIIOERPLTNLTKRRRPTSGLHPEDFTKKADLAVOKTPEMTNOCTOTE 540
 DB 481 LITGAFVTEPQIIOERPLTNLTKRRRPTSGLHPEDFTKKADLAVOKTPEMTNOCTOTE 540
 QY 541 QNGQVMNITNSGHEKTKGDSIQNEKNPNPIESLEKESAFKTKAPISSISSIMBLEINI 600
 DB 541 QNGQVMNITNSGHEKTKGDSIQNEKNPNPIESLEKESAFKTKAPISSISSIMBLEINI 600
 QY 601 HNSKAPKKNRLRRKSTHIALELVSRNLSPPNCTELOIDSCSSSEIKKKKNOMPV 660
 DB 601 HNSKAPKKNRLRRKSTHIALELVSRNLSPPNCTELOIDSCSSSEIKKKKNOMPV 660
 QY 661 RHSRMLQMEGKEPATGAKSKNKPNEQSKRHSOSTPELKLITNAPGFTKCSNTSELKE 720
 DB 661 RHSRMLQMEGKEPATGAKSKNKPNEQSKRHSOSTPELKLITNAPGFTKCSNTSELKE 720
 QY 721 FVNPSLPREEKEEKLKTVKVSNNADPKDMLSGEVLQTERSVSSSISLPGTDYGO 780
 DB 721 FVNPSLPREEKEEKLKTVKVSNNADPKDMLSGEVLQTERSVSSSISLPGTDYGO 780
 QY 781 ESIISLEVSTIGAKTEPNKCVSOCAAEENKGLIHGCSKDNNDTBEFKYPLGHEVNS 840
 DB 781 ESIISLEVSTIGAKTEPNKCVSOCAAEENKGLIHGCSKDNNDTBEFKYPLGHEVNS 840
 QY 841 RETSIEMESELDAQYLQNTFKVSKROSFALFSPNGNAEBCATPSAHSGLSKKOSPVT 900
 DB 841 RETSIEMESELDAQYLQNTFKVSKROSFALFSPNGNAEBCATPSAHSGLSKKOSPVT 900
 QY 901 FECEQKEBNQKNESNIKPVQTVNITAGFPVVGOKDPVDNAKCSIKGSRCLSSQERG 960
 DB 901 FECEQKEBNQKNESNIKPVQTVNITAGFPVVGOKDPVDNAKCSIKGSRCLSSQERG 960
 QY 961 NETGLITPNKGLLQNPRIPLPIKSFVTKCKKNLLENFEHSHMSPEREMGENIP 1020
 DB 961 NETGLITPNKGLLQNPRIPLPIKSFVTKCKKNLLENFEHSHMSPEREMGENIP 1020
 QY 1021 STVSTISRNNTRENVFKASSNINEVGSSTNEVGSINIEGSSDENIOAELGRRGPKL 1080
 DB 1021 STVSTISRNNTRENVFKASSNINEVGSSTNEVGSINIEGSSDENIOAELGRRGPKL 1080
 QY 1081 NAMRLGLVLOPEVYKQSLPGSNCKHPEIKKOYEVEVQTVNTDFSPYLISDNLEQPMSS 1140
 DB 1081 NAMRLGLVLOPEVYKQSLPGSNCKHPEIKKOYEVEVQTVNTDFSPYLISDNLEQPMSS 1140
 QY 1141 HASQVCESTPPDLDLDDGEIKEDTSAENDIKESSAVFESKVOGKGLSRSPSFTTHLAQ 1200
 DB 1141 HASQVCESTPPDLDLDDGEIKEDTSAENDIKESSAVFESKVOGKGLSRSPSFTTHLAQ 1200
 QY 1201 GYRGAKKLSESEENLSEDEELPCFOLLGKVANNISQSTRHSTVATECLSKTNEENL 1260
 DB 1201 GYRGAKKLSESEENLSEDEELPCFOLLGKVANNISQSTRHSTVATECLSKTNEENL 1260
 QY 1261 LSLKNSLNDCSNOYTLAKASQEHLSSEPTKCSASLSSQCELEEDLTANTWTODPFLIGS 1320
 DB 1261 LSLKNSLNDCSNOYTLAKASQEHLSSEPTKCSASLSSQCELEEDLTANTWTODPFLIGS 1320
 QY 1321 SKQMRHOSQSGVGLSDKELYSDDEERKGTGLENNQEQSDNSNIGEAASCESETSYSE 1380
 DB 1321 SKQMRHOSQSGVGLSDKELYSDDEERKGTGLENNQEQSDNSNIGEAASCESETSYSE 1380
 QY 1381 DCSGLSSQSDILITQOVRTMOHNLIKIQEAMAEVAVLEQSGQSPSNYSPTLISDSALE 1440

```

Db      1381 DCSGSSOSDILITTOORDMOHLITLOQEMAELEVLLEHGGQPSNSYPSIISDSSALE 1440
QY      1441 DRNPEQOSTSEKAVLTSOKSSEXPISQNEGLSADKFEVSAOSTSKNKEPVERSSPSK 1500
Db      1441 DURNEQOSTSEKAVLTSOKSSEXPISQNEGLSADKFEVSAOSTSKNKEPVERSSPSK 1500
QY      1501 CPSLDRMYMHS CSGSIQNRNTPSOBELIKVYDVEBOOLEESGPHDLTETSYLPRODLES 1560
Db      1501 CPSLDRMYMHS CSGSIQNRNTPSOBELIKVYDVEBOOLEESGPHDLTETSYLPRODLES 1560
QY      1561 TPYLSGISTLESDDPESDSEDRAPASAVGNIPSTSAKYVOLKVAESAOSPAAHHT 1620
Db      1561 TPYLSGISTLESDDPESDSEDRAPASAVGNIPSTSAKYVOLKVAESAOSPAAHHT 1620
QY      1621 DTAGYNAMESYREKPELTASTERYNKRMSMVVSGLTPEEPFLYKFKARKHITLTNLI 1680
Db      1621 DTAGYNAMESYREKPELTASTERYNKRMSMVVSGLTPEEPFLYKFKARKHITLTNLI 1680
QY      1681 TEETHHVYMKTDAEFVCERTLKYFLGIAGKRWVSFWYVQSIKERKMLNEHDFEVRGDY 1740
Db      1681 TEETHHVYMKTDAEFVCERTLKYFLGIAGKRWVSFWYVQSIKERKMLNEHDFEVRGDY 1740
QY      1741 VNGRHHQGRKARASODRKIFRGLCEICCGPFTNMPTDOLEMVQLCGASVYKELSSFTL 1800
Db      1741 VNGRHHQGRKARASODRKIFRGLCEICCGPFTNMPTDOLEMVQLCGASVYKELSSFTL 1800
QY      1801 GTGVHPITYVOPDANTEDNGFHAIGOMCEAPVYTRVMVDSVALYOCOEIDTFLIPIQH 1860
Db      1801 GTGVHPITYVOPDANTEDNGFHAIGOMCEAPVYTRVMVDSVALYOCOEIDTFLIPIQH 1860
QY      1861 SHY 1863
Db      1861 SHY 1863

```

RESULT 12

```

PCT-US95-10220-2
Sequence 2, Application PC/TUS9510220
GENERAL INFORMATION:
APPLICANT: SKOLNICK, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: Method for Diagnosing a
TITLE OF INVENTION: Predisposition for Breast and Ovarian Cancer
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESS: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10220
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:

```

```

APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08-308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ. ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: protein
PCT-US95-10220-2
Query Match 99.9%; Score 9642; DB 5; Length 1863;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1862; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY      1 MDLSALRYEVQNVINAMOKITCEPICELIKPEVSTKCDHIFCKFCMLKILNCKKPSQ 60
Db      1 MDLSALRYEVQNVINAMOKITCEPICELIKPEVSTKCDHIFCKFCMLKILNCKKPSQ 60
QY      61 CPLKNDITKRSLOESTRPSQLVEELIKITCAFOIDTGLEVANSYNFAKKENNSPEHLKD 120
Db      61 CPLKNDITKRSLOESTRPSQLVEELIKITCAFOIDTGLEVANSYNFAKKENNSPEHLKD 120
QY      121 EVSIISQKGYRRNARAKLLQSEPNLSLOETISLVQSLNGLGVYRLTKRKQIQPKTSYI 180
Db      121 EVSIISQKGYRRNARAKLLQSEPNLSLOETISLVQSLNGLGVYRLTKRKQIQPKTSYI 180
QY      181 ELGSDSSEPTVKATYCSVGOELQITPOGTREIISLSAKKACEPSETDYNTEHHQ 240
Db      181 ELGSDSSEPTVKATYCSVGOELQITPOGTREIISLSAKKACEPSETDYNTEHHQ 240
QY      241 PSNNDLNTTEKRAERHPEKYYOGSSVSNLHVEPCGTNTHASSILOHENSLLITKDRNVE 300
Db      241 PSNNDLNTTEKRAERHPEKYYOGSSVSNLHVEPCGTNTHASSILOHENSLLITKDRNVE 300
QY      301 KAEPCNKSKOPGLASOHNRRNAGSKETONDRRTPTSTKKYVLDNADPLCEREKWKOKLPC 360
Db      301 KAEPCNKSKOPGLASOHNRRNAGSKETONDRRTPTSTKKYVLDNADPLCEREKWKOKLPC 360
QY      361 SENPRDTEVPWITLNSSIQKYNEMFESRDELLGSDSDHDESESNKAVADVLDVLAENV 420
Db      361 SENPRDTEVPWITLNSSIQKYNEMFESRDELLGSDSDHDESESNKAVADVLDVLAENV 420
QY      421 EYSGSSEKIDLLASDPHALICKSERVHKSVESENIEDKIFGKYRRKASLPLNLSHTEN 480
Db      421 EYSGSSEKIDLLASDPHALICKSERVHKSVESENIEDKIFGKYRRKASLPLNLSHTEN 480
QY      481 LITGAFVTEPQIQRPLTNLTKRRKRPSTSLHEDPILKADLAVOQTPKINQGTQTE 540
Db      481 LITGAFVTEPQIQRPLTNLTKRRKRPSTSLHEDPILKADLAVOQTPKINQGTQTE 540
QY      541 ONGOVNITNSGHEKTKGDSIQNKNPNPIESLEKESAPFKTAKEPISSTISNNLELNI 600
Db      541 ONGOVNITNSGHEKTKGDSIQNKNPNPIESLEKESAPFKTAKEPISSTISNNLELNI 600

```

```

QY 601 HNSKAPKNNRLRRKSTRHIALELVYSRNLSPNCTELQIDSCSSSEETKKKKKYNNMPV 660
    |||||||
Db 601 HNSAPKNNRLRRKSTRHIALELVYSRNLSPNCTELQIDSCSSSEETKKKKKYNNMPV 660
QY 661 RSHSNLOLMGKEBAPATGAKKSNKPNQOTSKRHSDTEPELKLITJNAPGFTKCSNTSELKE 720
    |||||||
Db 661 RSHSNLOLMGKEBAPATGAKKSNKPNQOTSKRHSDTEPELKLITJNAPGFTKCSNTSELKE 720
QY 721 FVNSJLPREKEEKLLEVYKVSNNADPKDMLSGSERVLQTERSVSSSISLVPQTDYGTQ 780
    |||||||
Db 721 FVNSJLPREKEEKLLEVYKVSNNADPKDMLSGSERVLQTERSVSSSISLVPQTDYGTQ 780
QY 781 ESISLEEVSTLGRKATPKNKCVSOGCAAFENPKGLIHGCSKDNRDTEGFKPLGHEVNH 840
    |||||||
Db 781 ESISLEEVSTLGRKATPKNKCVSOGCAAFENPKGLIHGCSKDNRDTEGFKPLGHEVNH 840
QY 841 RETSIEMESELDAQYLQNTFKVSKRSQFALFSPNGNAEECATFSAHSGSLKKQSPKVT 900
    |||||||
Db 841 RETSIEMESELDAQYLQNTFKVSKRSQFALFSPNGNAEECATFSAHSGSLKKQSPKVT 900
QY 901 FECQKRENOGKNESNIKPVQVNTITGFPVYGKDPVDNAKCSITGSRFCLSSQFRG 960
    |||||||
Db 901 FECQKRENOGKNESNIKPVQVNTITGFPVYGKDPVDNAKCSITGSRFCLSSQFRG 960
QY 961 NETGLITPNKGLLQNFYRIPLPEPKSFYKTKCKNLLEBNPEHSMSPEREMGNENIP 1020
    |||||||
Db 961 NETGLITPNKGLLQNFYRIPLPEPKSFYKTKCKNLLEBNPEHSMSPEREMGNENIP 1020
QY 1021 STVSTISRNNIRENVFKASSNINEVGSSSTNEVGSSINIGSSDENIOAELGNRPKL 1080
    |||||||
Db 1021 STVSTISRNNIRENVFKASSNINEVGSSSTNEVGSSINIGSSDENIOAELGNRPKL 1080
QY 1081 NAMRLGVLQPEYVKOSLPGSNCKHPEIKOEYEVQVNTDPSPLIDNLEQPMGSS 1140
    |||||||
Db 1081 NAMRLGVLQPEYVKOSLPGSNCKHPEIKOEYEVQVNTDPSPLIDNLEQPMGSS 1140
QY 1141 HASQVSETPDDLDDDEIKEDTSFAENDIKESSAVSKSVQKGLSRSPFTHTLAQ 1200
    |||||||
Db 1141 HASQVSETPDDLDDDEIKEDTSFAENDIKESSAVSKSVQKGLSRSPFTHTLAQ 1200
QY 1201 GYRGAKKLESSEENLSDEBELPCFOHLLFGKYNNIPSGSTRHSTVATECLSKNTEENL 1260
    |||||||
Db 1201 GYRGAKKLESSEENLSDEBELPCFOHLLFGKYNNIPSGSTRHSTVATECLSKNTEENL 1260
QY 1261 LSLKNSLNDCSNOVITAKASOEHLSEETKCSASLFSQCSSELEDLANNTQDPLIGS 1320
    |||||||
Db 1261 LSLKNSLNDCSNOVITAKASOEHLSEETKCSASLFSQCSSELEDLANNTQDPLIGS 1320
QY 1321 SKOMRHQSESGVGLSDKEIVSDDEERGTLLENNQEQSMDSNLGAAGCESETVSE 1380
    |||||||
Db 1321 SKOMRHQSESGVGLSDKEIVSDDEERGTLLENNQEQSMDSNLGAAGCESETVSE 1380
QY 1381 DCSGLSSQSDILTTQORDTMOHNLKLOEMAELEAVLEQHGSPNSNYSPIISDSSALE 1440
    |||||||
Db 1381 DCSGLSSQSDILTTQORDTMOHNLKLOEMAELEAVLEQHGSPNSNYSPIISDSSALE 1440
QY 1441 DLNRPQSTSEKAVLTQKSESEYPISONPBGLSADKREYVADSDSTSKNKEPVGRSSPSK 1500
    |||||||
Db 1441 DLNRPQSTSEKAVLTQKSESEYPISONPBGLSADKREYVADSDSTSKNKEPVGRSSPSK 1500
QY 1501 CPSLDDRWYMHSCSGSLQNNRNPQOELIKVVDVEEQQLDESGPHDLETSTYLPROLEG 1560
    |||||||
Db 1501 CPSLDDRWYMHSCSGSLQNNRNPQOELIKVVDVEEQQLDESGPHDLETSTYLPROLEG 1560
QY 1561 TPYLESGISLFSDDPESDPSDRAPESARVGNIPSSSTALKVPOLKVAESAQSPAAAHNT 1620
    |||||||
Db 1561 TPYLESGISLFSDDPESDPSDRAPESARVGNIPSSSTALKVPOLKVAESAQSPAAAHNT 1620
QY 1621 DTAGYNNAMESVSREKELASTERVNKRKSMVYVSGITPEEPMLVYFPAKHHTLTNL 1680
    |||||||
Db 1621 DTAGYNNAMESVSREKELASTERVNKRKSMVYVSGITPEEPMLVYFPAKHHTLTNL 1680
QY 1681 TEETHVVMKTDAAEFVCERTIKFYLGAGKVVVSVFWYVQSIKERKMLNENHDEPVGDV 1740
    |||||||

```

```

Db 1681 TEETHVVMKTDAAEFVCERTIKFYLGAGKVVVSVFWYVQSIKERKMLNENHDEPVGDV 1740
    |||||||
QY 1741 VNGRNHOGPKRARESDORRIFRGLEICCYGFTNPTDQLEWVYOLCGASYVKELSSFTL 1800
    |||||||
Db 1741 VNGRNHOGPKRARESDORRIFRGLEICCYGFTNPTDQLEWVYOLCGASYVKELSSFTL 1800
QY 1801 GTGVHPIVYVQPDAMTEEDNGFHAIGOMCEAPVYVRENVLSVALYCOQELDTYLLPQIPH 1860
    |||||||
Db 1801 GTGVHPIVYVQPDAMTEEDNGFHAIGOMCEAPVYVRENVLSVALYCOQELDTYLLPQIPH 1860
QY 1861 SHY 1863
    |||
Db 1861 SHY 1863

```

```

RESULT 13
US-08-598-591-2
: Sequence 2, Application US/08598591
: Patent No. 5654155
: GENERAL INFORMATION:
:   APPLICANT: Allen, Antonette C.
:   APPLICANT: Alvarez, Christopher P.
:   APPLICANT: Critz, Brenda S.
:   APPLICANT: Murphy Patricia D.
:   APPLICANT: Olson, Sheri J.
:   APPLICANT: Schelter, Denise B.
:   APPLICANT: Zeng, Bin
:   TITLE OF INVENTION: A Consensus Sequence of the Human BRCA1 Gene
:   Patent No. 5654155
: NUMBER OF SEQUENCES: 74
: CORRESPONDENCE ADDRESS:
:   ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
:   STREET: 699 Prince St.
:   CITY: Alexandria
:   STATE: VA
:   COUNTRY: USA
:   ZIP: 22314
: COMPUTER READABLE FORM:
:   MEDIUM TYPE: Floppy disk
:   COMPUTER: IBM PC compatible
:   OPERATING SYSTEM: PC-DOS/MS-DOS
:   SOFTWARE: PatentIn Release #1.0, Version #1.30
: CURRENT APPLICATION DATA:
:   APPLICATION NUMBER: US/08/598,591
:   FILING DATE: herewith
:   CLASSIFICATION: 435
:   ATTORNEY/AGENT INFORMATION:
:   NAME: Swecker, Robert S.
:   REGISTRATION NUMBER: 19,885
:   REFERENCE/DOCKET NUMBER: 020160-282
: TELECOMMUNICATION INFORMATION:
:   TELEPHONE: 703-836-2021
:   TELEFAX: 703-836-6620
:   INFORMATION FOR SEQ ID NO: 2:
:   SEQUENCE CHARACTERISTICS:
:   LENGTH: 1863 amino acids
:   TYPE: amino acid
:   STRANDEDNESS: not relevant
:   TOPOLOGY: not relevant
:   MOLECULE TYPE: protein
:   ORIGINAL SOURCE:
:   ORGANISM: Homo sapiens
:   STRAIN: BRCA1
:   POSITION IN GENOME:
:   CHROMOSOME/SEGMENT: 17
:   MAP POSITION: 17q21
: US-08-598-591-2

```

```

Query Match          99.98; Score 9635; DB 1; Length 1863;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 1860; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

```

QY 1 MDLSALRYEEVQYINAMOKILECPICLLELIKPEVSTKCDHIFCECKMLKLNOKRGPSSQ 60
 Db 1 MDLSALRYEEVQYINAMOKILECPICLLELIKPEVSTKCDHIFCECKMLKLNOKRGPSSQ 60
 QY 61 CPLCKNDITKRSLOESTFESOLVBEELKICAFOLDTGLEFANSINPAKKNSEPHLKD 120
 Db 61 CPLCKNDITKRSLOESTFESOLVBEELKICAFOLDTGLEFANSINPAKKNSEPHLKD 120
 QY 121 EVSIIOSMGYNRAKRLLOSSEPNLSLOESTISVOLSNLGVRTJRTKORIOPOKTSYI 180
 Db 121 EVSIIOSMGYNRAKRLLOSSEPNLSLOESTISVOLSNLGVRTJRTKORIOPOKTSYI 180
 QY 181 ELGSDSEEDYVNAKATYCGVGOELQITPOGRDEISLDSAKKAACEFSEIDVYTNHHQ 240
 Db 181 ELGSDSEEDYVNAKATYCGVGOELQITPOGRDEISLDSAKKAACEFSEIDVYTNHHQ 240
 QY 241 PSNNDLNTTEKRAERHEPEKTOGSSVSNLHVEPGTNTHASLSOHENSLLITKORMVE 300
 Db 241 PSNNDLNTTEKRAERHEPEKTOGSSVSNLHVEPGTNTHASLSOHENSLLITKORMVE 300
 QY 301 KAEPCKNSKOPGLARSOHNRWAGSKETCNDRTPESTERKVDLNLADPLCEKEMNKOKLPC 360
 Db 301 KAEPCKNSKOPGLARSOHNRWAGSKETCNDRTPESTERKVDLNLADPLCEKEMNKOKLPC 360
 QY 361 SENRDTEDVPMITLNSIOKYNWFSRSDDELGSDSDHGESESNAAVADYLDVLEND 420
 Db 361 SENRDTEDVPMITLNSIOKYNWFSRSDDELGSDSDHGESESNAAVADYLDVLEND 420
 QY 421 EYSSSEKIDLADDPHEALICKSERVHKSVESEIEBKIFGKTRKAKSLPNLSHVEN 480
 Db 421 EYSSSEKIDLADDPHEALICKSERVHKSVESEIEBKIFGKTRKAKSLPNLSHVEN 480
 QY 481 LIIGAFTPEOIIIOERPLTNLKKRRRPTSGLHPEDTICKADLAVOKTPREMIINOCTOTE 540
 Db 481 LIIGAFTPEOIIIOERPLTNLKKRRRPTSGLHPEDTICKADLAVOKTPREMIINOCTOTE 540
 QY 541 ONGOVNMTNNGCHENKTKGDSIONENKNPPIESLEKEAFTKAPPISSISNMLELNI 600
 Db 541 ONGOVNMTNNGCHENKTKGDSIONENKNPPIESLEKEAFTKAPPISSISNMLELNI 600
 QY 601 HNSKAPKNRLRRKSTRHIALELVYSRNLSPCTELOIDSCSSSEIEKKKKKNQMPV 660
 Db 601 HNSKAPKNRLRRKSTRHIALELVYSRNLSPCTELOIDSCSSSEIEKKKKKNQMPV 660
 QY 661 RSHNNDLOMBGKEPATGAKKSNKPNEDTSKRHDSTPELKLITNAPGFTCSNTSELKE 720
 Db 661 RSHNNDLOMBGKEPATGAKKSNKPNEDTSKRHDSTPELKLITNAPGFTCSNTSELKE 720
 QY 721 FVNSPLPREKEELETIVKYSNNAEDPKDMLSGERVLOTERRSVSSSISLVPGTDYGO 780
 Db 721 FVNSPLPREKEELETIVKYSNNAEDPKDMLSGERVLOTERRSVSSSISLVPGTDYGO 780
 QY 781 ESISLLEVSTLGAKTEPNKCVSOCAAFENPKGLIHGCSKDNNDTEGKTYPLGHEVNS 840
 Db 781 ESISLLEVSTLGAKTEPNKCVSOCAAFENPKGLIHGCSKDNNDTEGKTYPLGHEVNS 840
 QY 841 RETSIEMESEELDQYIANTFKVSKROSFALFSPNGNAEECAFTSANSGLKOSPKYT 900
 Db 841 RETSIEMESEELDQYIANTFKVSKROSFALFSPNGNAEECAFTSANSGLKOSPKYT 900
 QY 901 FECEBKEENOGKNSNIKPVOTVITAGFPVVGOKDKPDVNAKSIKGSFECCLSSOPRG 960
 Db 901 FECEBKEENOGKNSNIKPVOTVITAGFPVVGOKDKPDVNAKSIKGSFECCLSSOPRG 960
 QY 961 NETGLTPNKHGLQNPYRIPPLPIKSFVTKCKNLEENFEHSHMSPREMGNEINP 1020
 Db 961 NETGLTPNKHGLQNPYRIPPLPIKSFVTKCKNLEENFEHSHMSPREMGNEINP 1020
 QY 1021 STVSTISRRNIRENVFKEASSNINEVGSSTNEVGSSTINEIGSSDENIQAELGRNGPKL 1080
 Db 1021 STVSTISRRNIRENVFKEASSNINEVGSSTNEVGSSTINEIGSSDENIQAELGRNGPKL 1080
 QY 1081 NAMLRGLGVLPYVVKOSLPGSNCKHPEIKOEVEVQVTVNTDPSYILISNLEQPKGSS 1140

Db 1081 NAMLRGLGVLPYVVKOSLPGSNCKHPEIKOEVEVQVTVNTDPSYILISNLEQPKGSS 1140
 QY 1141 HASOVCSFEPDLDLDDGEIKEDTSPAENDIKESSAVSKSVOKGELSRSPFTHHLAQ 1200
 Db 1141 HASOVCSFEPDLDLDDGEIKEDTSPAENDIKESSAVSKSVOKGELSRSPFTHHLAQ 1200
 QY 1201 GYRRGAKKLESSEENLSEDEBELPCOHLILFGKNNNIPSOSTRSTVATCLSKNTEENL 1260
 Db 1201 GYRRGAKKLESSEENLSEDEBELPCOHLILFGKNNNIPSOSTRSTVATCLSKNTEENL 1260
 QY 1261 LSLKNSLDCSNQYILAAASOEHHISEETKCSASLFSQCSLEDLTANTNTODPELIGS 1320
 Db 1261 LSLKNSLDCSNQYILAAASOEHHISEETKCSASLFSQCSLEDLTANTNTODPELIGS 1320
 QY 1321 SKOMRHOSEOGVGLSDKELYSDDBERGTGLENNNOEBSMDSNLGAAGCESSETSVSE 1380
 Db 1321 SKOMRHOSEOGVGLSDKELYSDDBERGTGLENNNOEBSMDSNLGAAGCESSETSVSE 1380
 QY 1381 DCSGLSSQSDILITTOORDTMOHNLIKLOENAELEAVLEQHGSOPSNSYPSIISDSSALE 1440
 Db 1381 DCSGLSSQSDILITTOORDTMOHNLIKLOENAELEAVLEQHGSOPSNSYPSIISDSSALE 1440
 QY 1441 DLNRPEOSTSEKAVILTSQKSSEYPISONPEGLSADKTEEVASDSTSKNKEPVERSSPK 1500
 Db 1441 DLNRPEOSTSEKAVILTSQKSSEYPISONPEGLSADKTEEVASDSTSKNKEPVERSSPK 1500
 QY 1501 CPSLDDRWYMHSCSGSLONRNYPSQOELIKVYDVEEQOLESEGHDLTETSYLPRODLRG 1560
 Db 1501 CPSLDDRWYMHSCSGSLONRNYPSQOELIKVYDVEEQOLESEGHDLTETSYLPRODLRG 1560
 QY 1561 TPYLESGISLFPDSDPESDRAPEBARSARVGNIPSSSAKVPOLKAAESAOCPAAAHFT 1620
 Db 1561 TPYLESGISLFPDSDPESDRAPEBARSARVGNIPSSSAKVPOLKAAESAOCPAAAHFT 1620
 QY 1621 DTAGYNAMEESVREKPELTASTERVNRKSMVYSGLTPEPMYVFAKHHITLNLIL 1680
 Db 1621 DTAGYNAMEESVREKPELTASTERVNRKSMVYSGLTPEPMYVFAKHHITLNLIL 1680
 QY 1681 TEETHVVMKTDAEFVCEERTLYPLGIAGKRVVSYFVWYOSIKERKMLNEHFEVRCGV 1740
 Db 1681 TEETHVVMKTDAEFVCEERTLYPLGIAGKRVVSYFVWYOSIKERKMLNEHFEVRCGV 1740
 QY 1741 VNGRNHOGPKRARSODRKIFRGLEICCYBFTMPIDOLEMVAOLGASVAVELSSFTL 1800
 Db 1741 VNGRNHOGPKRARSODRKIFRGLEICCYBFTMPIDOLEMVAOLGASVAVELSSFTL 1800
 QY 1801 GTGVHPITVVOVDMATEONGFHAIGOMCEAPVYTRVAVLDSVALYOCOEDTLYLPOIHP 1860
 Db 1801 GTGVHPITVVOVDMATEONGFHAIGOMCEAPVYTRVAVLDSVALYOCOEDTLYLPOIHP 1860
 QY 1861 SHY 1863
 Db 1861 SHY 1863

RESULT 14
 US-08-798-691-2
 : Sequence 2, Application US/08798691
 : Patent No. 5750400
 : GENERAL INFORMATION:
 : APPLICANT: Murphy, Patricia D.
 : APPLICANT: Allen, Antonette C.
 : APPLICANT: Alvaras, Christopher P.
 : APPLICANT: Critz, Brenda S.
 : APPLICANT: Olson, Sheri J.
 : APPLICANT: Schelter, Denise B.
 : APPLICANT: Zeng, Bin
 : TITLE OF INVENTION: Coding Sequences of the Human
 : TITLE OF INVENTION: BRCA1 Gene
 : NUMBER OF SEQUENCES: 72
 : CORRESPONDENCE ADDRESS:
 : ADDRESSEE: ONCORMED

STREET: 200 Perry Parkway
CITY: Gaithersburg
STATE: MD
COUNTRY: USA
ZIP: 20877
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Thomas Gallejos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054CJP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 1863 amino acids
TYPE: amino acid
STRANDEDNESS: not relevant
TOPOLOGY: not relevant
MOLECULE TYPE: protein
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-798-691-2

Query Match 99.9%; Score 9635; DB 1; Length 1863;
Best Local Similarity 99.8%; Pred. No. 0;
Matches 1660; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 MDLSALRVEEYONVINAMOKILIECPICLELIKPEVSTKCDHIECFCKMLKLNOKKPSQ 60
DB 1 MDLSALRVEEYONVINAMOKILIECPICLELIKPEVSTKCDHIECFCKMLKLNOKKPSQ 60
QY 61 CPLCANDITKRSLOSTREPSOLVEBELKLTICAFOLDTGLEVANSNFAKKENNSPEHLKD 120
DB 61 CPLCANDITKRSLOSTREPSOLVEBELKLTICAFOLDTGLEVANSNFAKKENNSPEHLKD 120
QY 121 EVSIIOSMGYRRARRKLLQSEPEPNSLOETSLSYOLSNLGVTRLRTKORIOPOKTSYTI 180
DB 121 EVSIIOSMGYRRARRKLLQSEPEPNSLOETSLSYOLSNLGVTRLRTKORIOPOKTSYTI 180
QY 181 ELGSDSSEDTYKATYCSVGOELLQITPOGTRDEISLDSAKKACESEDTVTNTEHHQ 240
DB 181 ELGSDSSEDTYKATYCSVGOELLQITPOGTRDEISLDSAKKACESEDTVTNTEHHQ 240
QY 241 PENNDLNTTEKRAARRHPEKYGSSVSNLHVPCCTNTHASSLOJHENSLLTKRMANVE 300
DB 241 PENNDLNTTEKRAARRHPEKYGSSVSNLHVPCCTNTHASSLOJHENSLLTKRMANVE 300
QY 301 KAEFCNKSKOPGLASOHNRNAGSKETCNDRTPTSTEKKVDLANADPLCEKREKMNOKLPC 360
DB 301 KAEFCNKSKOPGLASOHNRNAGSKETCNDRTPTSTEKKVDLANADPLCEKREKMNOKLPC 360
QY 361 SENPDEDEDVPIITLNNSSIOKVNEWFSNDELGSDSDHGESNAKAVADVLVNEVD 420
DB 361 SENPDEDEDVPIITLNNSSIOKVNEWFSNDELGSDSDHGESNAKAVADVLVNEVD 420
QY 421 EYSGSSEKIDILASPHALICKSRVHSKSVESNIEKIFGKTYRKRAASLPNLSHYTEN 480
DB 421 EYSGSSEKIDILASPHALICKSRVHSKSVESNIEKIFGKTYRKRAASLPNLSHYTEN 480
QY 481 LITGAFVTEPQIIQERPLTNKLRRRRTSGLHPEDFIKKADLAVQKTPMEMINQCTNGTE 540

DB 481 LITGAFVTEPQIIQERPLTNKLRRRRTSGLHPEDFIKKADLAVQKTPMEMINQCTNGTE 540
QY 541 QNGOVYNNITNSGHEKTKGDSIQNEKNPPIISLEKESAFKTAEPISSTINMELEUNI 600
DB 541 QNGOVYNNITNSGHEKTKGDSIQNEKNPPIISLEKESAFKTAEPISSTINMELEUNI 600
QY 601 HNSKAPKKRRLRRKSTRIHAIELVSNLSPPCOTELQIDSCSSSEETKKKKNOMPV 660
DB 601 HNSKAPKKRRLRRKSTRIHAIELVSNLSPPCOTELQIDSCSSSEETKKKKNOMPV 660
QY 661 HNSRNLOMEGKEPATGAKSNKPNEQTSKRSDSTFPELKLTNAPGFTKCSNTSELKE 720
DB 661 HNSRNLOMEGKEPATGAKSNKPNEQTSKRSDSTFPELKLTNAPGFTKCSNTSELKE 720
QY 721 FVNPSLPREKEKELETYKVSNNADPKDMLSGERVLOTERSVSSSISLVPGTDYGTQ 780
DB 721 FVNPSLPREKEKELETYKVSNNADPKDMLSGERVLOTERSVSSSISLVPGTDYGTQ 780
QY 781 ESISLLEVSTLGAKTEPKKCVSOCAAFENPGLIHGSKDNRNDEGFKYPLGHEVNS 840
DB 781 ESISLLEVSTLGAKTEPKKCVSOCAAFENPGLIHGSKDNRNDEGFKYPLGHEVNS 840
QY 841 RETSIEMESELDAQYLONTFEKYSKROSEFALPSNPGNAEECATFSAHSGSLKQSPKYT 900
DB 841 RETSIEMESELDAQYLONTFEKYSKROSEFALPSNPGNAEECATFSAHSGSLKQSPKYT 900
QY 901 FECEOKENOGKNESNIKPVQTVNTITAGFPVYQKDKPYDNAKCSIKGSRCLCSQFPG 960
DB 901 FECEOKENOGKNESNIKPVQTVNTITAGFPVYQKDKPYDNAKCSIKGSRCLCSQFPG 960
QY 961 NETGLITPKHGLLNPNYRIPPLFPKSVKCKKNLLEENFEHSMSPREMGENTP 1020
DB 961 NETGLITPKHGLLNPNYRIPPLFPKSVKCKKNLLEENFEHSMSPREMGENTP 1020
QY 1021 STVSTISRNNINRENFKEASSNINEVSGSTNEVSSINELIGSSDENIOAELGRNGPPL 1080
DB 1021 STVSTISRNNINRENFKEASSNINEVSGSTNEVSSINELIGSSDENIOAELGRNGPPL 1080
QY 1081 NAMLRGLVLOPEVYQSLPGSNCKHPEIKOEYEEVQVNTDFSPYLLISDMLDOPMGSS 1140
DB 1081 NAMLRGLVLOPEVYQSLPGSNCKHPEIKOEYEEVQVNTDFSPYLLISDMLDOPMGSS 1140
QY 1141 HASQVCSPTPDLDLDDGELKEDTSPFAENDIKSSAVFSKSVQSGELSRSPFTTHLQ 1200
DB 1141 HASQVCSPTPDLDLDDGELKEDTSPFAENDIKSSAVFSKSVQSGELSRSPFTTHLQ 1200
QY 1201 GYRGAKKLESSEENLSPDEELPCFOHLLFGKVNNTIPSOSTRHSTVATECISKNTENL 1260
DB 1201 GYRGAKKLESSEENLSPDEELPCFOHLLFGKVNNTIPSOSTRHSTVATECISKNTENL 1260
QY 1261 ISLKNSLNDCSNOVILANASOEHLSEETKCSASLFFSQCSELEDLTANTNTODPFLIGS 1320
DB 1261 ISLKNSLNDCSNOVILANASOEHLSEETKCSASLFFSQCSELEDLTANTNTODPFLIGS 1320
QY 1321 SKOMRHOSQGVGLSDKEIYSDDERGGLGEENNOEBSMNSNGEASGCESETSVSE 1380
DB 1321 SKOMRHOSQGVGLSDKEIYSDDERGGLGEENNOEBSMNSNGEASGCESETSVSE 1380
QY 1381 DCSGLSOSDILITTOORDTMOHNLKLOEAMELFAVLEOHOSQPSNSYPSIISDSALE 1440
DB 1381 DCSGLSOSDILITTOORDTMOHNLKLOEAMELFAVLEOHOSQPSNSYPSIISDSALE 1440
QY 1441 DIRNEPOSTSEKAVITISOKSSEYPISONPEGLISADKFEVSADSSSTSKNEPEVERSSPSK 1500
DB 1441 DIRNEPOSTSEKAVITISOKSSEYPISONPEGLISADKFEVSADSSSTSKNEPEVERSSPSK 1500
QY 1501 CPSLDDRMVHMSCSSILNRRNPPSOEELIKVYVDEQOLESGBPDLTETSLPQODLEG 1560
DB 1501 CPSLDDRMVHMSCSSILNRRNPPSOEELIKVYVDEQOLESGBPDLTETSLPQODLEG 1560
QY 1561 TPYLESGSILFSDDESPSEDRAESARVGNIPSTALAKVQDLVAVESASQSPAATTT 1620

Db 1561 TPYLESGISLFSDDPESDPSSEDRAPESARVGNIPSTSLAKVPOLKVAESAGPAAAHNT 1620
 QY 1621 DTAGYNAMAEVSREKPELTASTERYNKRMSVYSGLTPEEPFLVYKFAKKHITLTNLI 1680
 Db 1621 DTAGYNAMAEVSREKPELTASTERYNKRMSVYSGLTPEEPFLVYKFAKKHITLTNLI 1680
 QY 1681 TEFTTHVVMKTDAEVFCERTLKLYFLGIAGKMWVSYPVWVQSIIKERKMLNEHDFEVRGDV 1740
 Db 1681 TEFTTHVVMKTDAEVFCERTLKLYFLGIAGKMWVSYPVWVQSIIKERKMLNEHDFEVRGDV 1740
 QY 1741 VNGNRHOGPKRARESODKIRFGLICCYGPTNPTDOLMMVQLCGASVYKELSSFTL 1800
 Db 1741 VNGNRHOGPKRARESODKIRFGLICCYGPTNPTDOLMMVQLCGASVYKELSSFTL 1800
 QY 1801 GTGVHPIVYVOPDAMTEDENGFHAIGOMCEAPVYTRRWYLDVSVALYQCELDYLLIPIPH 1860
 Db 1801 GTGVHPIVYVOPDAMTEDENGFHAIGOMCEAPVYTRRWYLDVSVALYQCELDYLLIPIPH 1860
 QY 1861 SHY 1863
 Db 1861 SHY 1863

RESULT 15

US-08-798-691-6
 ; Sequence 6, Application US/08798691
 ; Patent No. 5750400
 ; GENERAL INFORMATION:
 ; APPLICANT: Murphy, Patricia D.
 ; APPLICANT: Allen, Antonette C.
 ; APPLICANT: Alvarez, Christopher P.
 ; APPLICANT: Ciliz, Brenda S.
 ; APPLICANT: Olson, Sheri J.
 ; APPLICANT: Schelter, Denise B.
 ; APPLICANT: Zeng, Bin
 ; TITLE OF INVENTION: Coding Sequences of the Human
 ; TITLE OF INVENTION: BRCA1 Gene
 ; NUMBER OF SEQUENCES: 72
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: ONCOMED
 ; STREET: 200 Perry Parkway
 ; CITY: Gaithersburg
 ; STATE: MD
 ; COUNTRY: USA
 ; ZIP: 20877
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Floppy disk
 ; COMPUTER: IBM PC compatible
 ; OPERATING SYSTEM: PC-DOS/MS-DOS
 ; SOFTWARE: Patentin Release #1.0, Version #1.30
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/08/798,691
 ; FILING DATE: 12-Feb-97
 ; CLASSIFICATION: 435
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: Thomas Gallegos
 ; REGISTRATION NUMBER: 32,692
 ; REFERENCE/DOCKET NUMBER: PA-0054CIP
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: 301-527-2051
 ; TELEFAX: 301-208-6997
 ; INFORMATION FOR SEQ ID NO: 6:
 ; SEQUENCE CHARACTERISTICS:
 ; LENGTH: 1863 amino acids
 ; TYPE: amino acid
 ; STRANDEDNESS: not relevant
 ; TOPOLOGY: not relevant
 ; MOLECULE TYPE: protein
 ; ORIGINAL SOURCE:
 ; ORGANISM: Homo sapiens
 ; STRAIN: BRCA1
 ; POSITION IN GENOME:
 ; CHROMOSOME/SEGMENT: 17

MAP POSITION: 17q21
 US-08-798-691-6
 Query Match 99.9%; Score 9635; DB 1; Length 1863;
 Best Local Similarity 99.8%; Pred. No. 0;
 Matches 1600; Conservative 1; Mismatches 2; Indels 0; Gaps 0;
 1 MDLSALRYEYQVYINAMQKILCEPICLLELKREPVSTKCHIEFCFQMLLNQKGPQ 60
 1 MDLSALRYEYQVYINAMQKILCEPICLLELKREPVSTKCHIEFCFQMLLNQKGPQ 60
 61 CPLKNDITKRSLSDESTFVSOLVBECLKITAFOLDLGLRYANSYNNAKKENSPBLKD 120
 61 CPLKNDITKRSLSDESTFVSOLVBECLKITAFOLDLGLRYANSYNNAKKENSPBLKD 120
 121 EYSIIQSGYRNRKARLLQSEPNPSLOETSLSTVQLSLGTVRLTKRKQIOFOKTSYI 180
 121 EYSIIQSGYRNRKARLLQSEPNPSLOETSLSTVQLSLGTVRLTKRKQIOFOKTSYI 180
 181 ELGSDSSEDTYNAKATYCSVGDQELLQITPGQTRDEISLDSAKKACEFSETDYNTNEHQ 240
 181 ELGSDSSEDTYNAKATYCSVGDQELLQITPGQTRDEISLDSAKKACEFSETDYNTNEHQ 240
 241 PSNNDLNTTEKRAAEHRPEKIQSSVSNLHVEPCGVTTHASSLOHENSILLTKDRANVE 300
 241 PSNNDLNTTEKRAAEHRPEKIQSSVSNLHVEPCGVTTHASSLOHENSILLTKDRANVE 300
 301 KAEPCNKSKOPGLARSOHNRWAGSKETCNDRPTSTKRYDLNADPLCEKRNKKOLPC 360
 301 KAEPCNKSKOPGLARSOHNRWAGSKETCNDRPTSTKRYDLNADPLCEKRNKKOLPC 360
 361 SENPRDTEVPWITLNSIQRVNEFMSRDELLGSDSDSHGSESNKAVADVLDVNEVD 420
 361 SENPRDTEVPWITLNSIQRVNEFMSRDELLGSDSDSHGSESNKAVADVLDVNEVD 420
 421 EYSGSSEKIDLLADPHALCKSERVHKSVEENIEDKIFGKTYRKASLPLNLSHYTEN 480
 421 EYSGSSEKIDLLADPHALCKSERVHKSVEENIEDKIFGKTYRKASLPLNLSHYTEN 480
 481 LIIGAFVPEOIIQERPLTNKLRKRRTSGLHDEDEIKKADLAVQKTPPMINQNOTE 540
 481 LIIGAFVPEOIIQERPLTNKLRKRRTSGLHDEDEIKKADLAVQKTPPMINQNOTE 540
 541 ONGOVAMITNSGHEKTIKGSIONEKNPNPIESLEKSAKTYAEPISISSISNMELELN 600
 541 ONGOVAMITNSGHEKTIKGSIONEKNPNPIESLEKSAKTYAEPISISSISNMELELN 600
 601 HNSKAPKKNRLRRKSTRHIALELVYSRNLSPPNCTELOIDSCSSSEETKKKKYOMPV 660
 601 HNSKAPKKNRLRRKSTRHIALELVYSRNLSPPNCTELOIDSCSSSEETKKKKYOMPV 660
 661 RHRNRLOIMEGKEPATGAKKSNKPNEQTSKRHSDPPELKLTNAPGSFKCSNTSELKE 720
 661 RHRNRLOIMEGKEPATGAKKSNKPNEQTSKRHSDPPELKLTNAPGSFKCSNTSELKE 720
 721 FVNPSPREKEEKLFTYKVSNNADPKDMLSGERYLQTERSVSSISLVPGDTGYQ 780
 721 FVNPSPREKEEKLFTYKVSNNADPKDMLSGERYLQTERSVSSISLVPGDTGYQ 780
 781 ESIISLEVSTLGRKTEPNKCVSQCFAFENPKGLIHCCSDNNDNDEGEFYPLIGHVYNS 840
 781 ESIISLEVSTLGRKTEPNKCVSQCFAFENPKGLIHCCSDNNDNDEGEFYPLIGHVYNS 840
 841 RETSIEMESELDQOYLONTFKVSKROSFALFSPGNAEECATFSAHSGSLKQSPKYT 900
 841 RETSIEMESELDQOYLONTFKVSKROSFALFSPGNAEECATFSAHSGSLKQSPKYT 900
 901 FECEQKEENOGKNSNIRKPYQVYVITAGFVYVQKDKPYDNACSIKGSRCFLSSQFPG 960
 901 FECEQKEENOGKNSNIRKPYQVYVITAGFVYVQKDKPYDNACSIKGSRCFLSSQFPG 960
 961 NETGLITPNKHGLQNTYRIPLPLPKISFYTKCKKNLLENNEEHSMSPERKMGENTP 1020
 961 NETGLITPNKHGLQNTYRIPLPLPKISFYTKCKKNLLENNEEHSMSPERKMGENTP 1020

```
Db 961 NETGLITPNKHGLQNPYRIPPLPPIKFSVTKCKKNLLENEFEHSMSPEREMGNENIP 1020
QY 1021 STVSTISRNNIRENVFKASSININEVGSSTNEVGSSINEIGSSDENIOAELGRNRGPKL 1080
Db 1021 STVSTISRNNIRENVFKASSININEVGSSTNEVGSSINEIGSSDENIOAELGRNRGPKL 1080
QY 1081 NAMLRGLVLOPEVYKOSLPGSNCKHPEIKKOYEVEVOTVNTDFSPYLIISDNLQPMGSS 1140
Db 1081 NAMLRGLVLOPEVYKOSLPGSNCKHPEIKKOYEVEVOTVNTDFSPYLIISDNLQPMGSS 1140
QY 1141 HASQVCSPTDDLDLDDGEIKEDTSPAENDIKESSAVFSKSVQKGLSRSPSPFTHTHLAQ 1200
Db 1141 HASQVCSPTDDLDLDDGEIKEDTSPAENDIKESSAVFSKSVQKGLSRSPSPFTHTHLAQ 1200
QY 1201 GYRRGAKLSESEENLSEDEDELPCFOHLLFGKVNNTIPSOSTRHSTVATECLSKNTEENL 1260
Db 1201 GYRRGAKLSESEENLSEDEDELPCFOHLLFGKVNNTIPSOSTRHSTVATECLSKNTEENL 1260
QY 1261 LSLKNSLNDCSNOVILAKASOEHLSEFTKCSASLFSQCSLEDELTAANTNTQDPFLIGS 1320
Db 1261 LSLKNSLNDCSNOVILAKASOEHLSEFTKCSASLFSQCSLEDELTAANTNTQDPFLIGS 1320
QY 1321 SKOMRHOSESOGVGLSDKELVSDDERGTGLEENNOEQSMDSNLGEAASGCESETSVSE 1380
Db 1321 SKOMRHOSESOGVGLSDKELVSDDERGTGLEENNOEQSMDSNLGEAASGCESETSVSE 1380
QY 1381 DCSGSSOSDILITTOORPTMOHNLKLOEMAEFAVLQOHGSOPSNSYPTIISDSALE 1440
Db 1381 DCSGSSOSDILITTOORPTMOHNLKLOEMAEFAVLQOHGSOPSNSYPTIISDSALE 1440
QY 1441 DLRNPEQSTSEKAVLTQSKSSEYPISONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
Db 1441 DLRNPEQSTSEKAVLTQSKSSEYPISONPEGLSADKFEVSADSTSKNKEPVERSSPSK 1500
QY 1501 CPSLDDRWYMHSCSGSLQNRNYPQOEELIKVYDVEEQOLEESGPHDLTETSYLPRODLEG 1560
Db 1501 CPSLDDRWYMHSCSGSLQNRNYPQOEELIKVYDVEEQOLEESGPHDLTETSYLPRODLEG 1560
QY 1561 TPYLESGISLFSDDPESDPSREDRAPESARVGNIPSSSTALKVPOLKVAESAGPAAHTT 1620
Db 1561 TPYLESGISLFSDDPESDPSREDRAPESARVGNIPSSSTALKVPOLKVAESAGPAAHTT 1620
QY 1621 DTAGYNAMEESYREKPELTASTERYNKRMSWVYSGLTPEEFMLYKFAKKHHTLTNLI 1680
Db 1621 DTAGYNAMEESYREKPELTASTERYNKRMSWVYSGLTPEEFMLYKFAKKHHTLTNLI 1680
QY 1681 TEETTHVVMKTDAEFVCERTLKYLGLIAGKVVVSYFWVTOSIKERKMLNEHDEFVRGDV 1740
Db 1681 TEETTHVVMKTDAEFVCERTLKYLGLIAGKVVVSYFWVTOSIKERKMLNEHDEFVRGDV 1740
QY 1741 VNGRNHOGPKRARESODRKIFRGLEICCYGPTNMPDQLEMMVOLCGASVYKELSSFTL 1800
Db 1741 VNGRNHOGPKRARESODRKIFRGLEICCYGPTNMPDQLEMMVOLCGASVYKELSSFTL 1800
QY 1801 GTGVHPIVVOVPDAMTEEDNGFHAIGOMCEAPVYTRVWLDVSLVAYQCOELDTYLLIQIPH 1860
Db 1801 GTGVHPIVVOVPDAMTEEDNGFHAIGOMCEAPVYTRVWLDVSLVAYQCOELDTYLLIQIPH 1860
QY 1861 SHY 1863
Db 1861 SHY 1863
```

Search completed: June 27, 2003, 18:24:40
Job time : 31 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2003 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 27, 2003, 17:30:39 ; Search time 273.42 seconds
(without alignments)
6405.633 Million cell updates/sec

Title: US-09-734-672-3

Perfect score: 5711

Sequence: 1 AGCTGCTGAGACTTCTCTG.....TCCCCACAGCCACTACTGA 5711

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 441362 seqs, 153338381 residues

Total number of hits satisfying chosen parameters: 882724

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%
Listing first 45 summaries

Database :

Issued_Patents_NA:*
1: /cgn2_6/ptodata/2/lna/5A.COMB.seq:*
2: /cgn2_6/ptodata/2/lna/5B.COMB.seq:*
3: /cgn2_6/ptodata/2/lna/6A.COMB.seq:*
4: /cgn2_6/ptodata/2/lna/6B.COMB.seq:*
5: /cgn2_6/ptodata/2/lna/PTUS.COMB.seq:*
6: /cgn2_6/ptodata/2/lna/Backfile1.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	5709.4	100.0	5711	1	US-08-798-691-3
2	5709.4	100.0	5711	3	US-08-825-487A-3
3	5709.4	100.0	5711	3	US-09-074-476-5
4	5707.8	99.9	5711	2	US-08-658-322-1
5	5707.8	99.9	5712	2	US-08-603-753D-1
6	5707.8	99.9	5712	3	US-09-099-753-1
7	5707.8	99.9	5712	4	US-08-986-106-1
8	5707.8	99.9	5712	4	US-09-007-678B-47
9	5707.8	99.9	5712	4	US-08-480-784-1
10	5707.8	99.9	5714	1	US-08-483-553-1
11	5707.8	99.9	5714	1	US-08-487-002-1
12	5707.8	99.9	5714	1	US-08-483-554B-1
13	5707.8	99.9	5714	1	US-08-488-011B-1
14	5707.8	99.9	5714	4	US-08-850-727-1
15	5707.8	99.9	5714	5	PCR-US95-10202-1
16	5707.8	99.9	5714	5	PCR-US95-10203-1
17	5707.8	99.9	5714	5	PCR-US95-10220-1
18	5706.2	99.9	5711	1	US-08-425-061-4
19	5706.2	99.9	5711	1	US-08-425-061-10
20	5706.2	99.9	5711	1	US-08-825-886-4
21	5706.2	99.9	5711	1	US-08-825-886-10
22	5704.6	99.9	5711	1	US-08-798-691-5
23	5704.6	99.9	5711	3	US-08-825-487A-5
24	5704.6	99.9	5711	3	US-09-074-476-3
25	5703	99.9	5711	1	US-08-598-591-1
26	5703	99.9	5711	1	US-08-798-691-1
27	5703	99.9	5711	3	US-08-825-487A-1

28	5703	99.9	5711	3	US-09-074-476-1	Sequence 1, App11
29	5696.8	99.8	5712	1	US-08-425-061-12	Sequence 12, App1
30	5696.8	99.8	5712	1	US-08-825-886-12	Sequence 12, App1
31	5695.8	99.7	5710	1	US-08-425-061-6	Sequence 6, App11
32	5695.8	99.7	5710	1	US-08-825-886-6	Sequence 6, App11
33	5693.8	99.7	5709	1	US-08-425-061-2	Sequence 2, App11
34	5693.8	99.7	5709	1	US-08-425-061-7	Sequence 7, App11
35	5693.8	99.7	5709	1	US-08-425-061-8	Sequence 8, App11
36	5693.8	99.7	5709	1	US-08-425-061-9	Sequence 9, App11
37	5693.8	99.7	5709	1	US-08-825-886-2	Sequence 2, App11
38	5693.8	99.7	5709	1	US-08-825-886-7	Sequence 7, App11
39	5693.8	99.7	5709	1	US-08-825-886-8	Sequence 8, App11
40	5693.8	99.7	5709	1	US-08-825-886-9	Sequence 9, App11
41	5689.8	99.6	5707	1	US-08-425-061-11	Sequence 11, App1
42	5689.8	99.6	5707	1	US-08-825-886-11	Sequence 11, App1
43	5653.8	99.0	5689	1	US-08-425-061-3	Sequence 3, App11
44	5653.8	99.0	5689	1	US-08-825-886-3	Sequence 3, App11
45	5627.6	98.5	5770	1	US-08-425-061-5	Sequence 5, App11

ALIGNMENTS

RESULT 1
US-08-798-691-3
Sequence 3, Application US/08798691
Patent No. 5750400
GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Cirtz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
TITLE OF INVENTION: Coding Sequences of the Human
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSER: ONCORMED
STREET: 200 Perry Parkway
CITY: Galtersberg
STATE: MD
COUNTRY: USA
ZIP: 20877
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Thomas Gallegos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17

MAP POSITION: 17421
US-08-798-691-3

Query Match 100.0%; Score 5709.4; DB 1; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5710; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

QY 1 AGCTCGCTGAGACTCTCTGAGACCCCGACACAGGCTGTGGGTTTCTCAGATTAAGTGGGC 60
DB 1 AGCTCGCTGAGACTCTCTGAGACCCCGACACAGGCTGTGGGTTTCTCAGATTAAGTGGGC 60
QY 61 CTTGCGCTCAGAGAGGCTTTCACCTCTGCTGGTAAAGTTCAATTGAGACGAAAGAAA 120
DB 61 CTTGCGCTCAGAGAGGCTTTCACCTCTGCTGGTAAAGTTCAATTGAGACGAAAGAAA 120
QY 121 TGGATTTATCTGCTCTTGGGCTTGAAGAGTACAAAATGCTATTATGCTATGCAAGAAA 180
DB 121 TGGATTTATCTGCTCTTGGGCTTGAAGAGTACAAAATGCTATTATGCTATGCAAGAAA 180
QY 181 TCTTAGAGTGTCCCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAGTGTGACC 240
DB 181 TCTTAGAGTGTCCCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAGTGTGACC 240
QY 241 ACATATTTTGCAGAAATTTTGCATGCTGGAACCTTCTACACAGAGAAAGGCTTCACAGT 300
DB 241 ACATATTTTGCAGAAATTTTGCATGCTGGAACCTTCTACACAGAGAAAGGCTTCACAGT 300
QY 301 GTCCTTTATGTAAGATGATATTAACCAAGAGGCTCAAGAAAGTACGAGATTATGTC 360
DB 301 GTCCTTTATGTAAGATGATATTAACCAAGAGGCTCAAGAAAGTACGAGATTATGTC 360
QY 361 AACTTTGTAAGAGCTATGAAAAATCATTTTGTCTTACGTTGACACAGGTTTGAGT 420
DB 361 AACTTTGTAAGAGCTATGAAAAATCATTTTGTCTTACGTTGACACAGGTTTGAGT 420
QY 421 ATGCAACAGCTATATTTTGCAGAAAGGAAATTAATCTCCTGTAATCTGAAAGATG 480
DB 421 ATGCAACAGCTATATTTTGCAGAAAGGAAATTAATCTCCTGTAATCTGAAAGATG 480
QY 481 AAGTTTCTATCATTCAAAAGTATGAGCTACAGAAACCGTGCAGAAAGTCTTACAGATG 540
DB 481 AAGTTTCTATCATCAAAAGTATGAGCTACAGAAACCGTGCAGAAAGTCTTACAGATG 540
QY 541 AACCCGAAATCCTTCTCTGAGAAACCACTCTCAGTGTCACTCTCTAACTCTGGA 600
DB 541 AACCCGAAATCCTTCTCTGAGAAACCACTCTCAGTGTCACTCTCTAACTCTGGA 600
QY 601 CTGTGAGAGCTGTGAGGCAAGAGGAGATACAACTCAAAAGAGCTGTCTATCATG 660
DB 601 CTGTGAGAGCTGTGAGGCAAGAGGAGATACAACTCAAAAGAGCTGTCTATCATG 660
QY 661 AATTGGATCTGATTTCTTCTGAGATACCGTTAATAGGCACTTATGCAAGTGGAG 720
DB 661 AATTGGATCTGATTTCTTCTGAGATACCGTTAATAGGCACTTATGCAAGTGGAG 720
QY 721 ATCAAGAAATGTATCAAAATCACCCCTCAAGAACAGGAGTGAATCAATTGATG 780
DB 721 ATCAAGAAATGTATCAAAATCACCCCTCAAGAACAGGAGTGAATCAATTGATG 780
QY 781 CAAAAAAGGCTGTGGAATTTTCTGAGAGGATGTAACTAATATCAATCATCATC 840
DB 781 CAAAAAAGGCTGTGGAATTTTCTGAGAGGATGTAACTAATATCAATCATCATC 840
QY 841 CCAATAAATGATTTTGAACACCACTGAGAAAGCTGACAGTGAAGGATCAGAAAAGT 900
DB 841 CCAATAAATGATTTTGAACACCACTGAGAAAGCTGACAGTGAAGGATCAGAAAAGT 900
QY 901 ATAGAGGTAGTGTGTTTCAAACTTGAGCATGTGGAGCATGTGGCAAAATCTCATGCA 960
DB 901 ATAGAGGTAGTGTGTTTCAAACTTGAGCATGTGGAGCATGTGGCAAAATCTCATGCA 960
QY 961 GCTCATTAAGAGCTAGAGACAGGTTTATTAATCAATAGAGATGAATGTAGAA 1020
DB 961 GCTCATTAAGAGCTAGAGACAGGTTTATTAATCAATAGAGATGAATGTAGAA 1020

```

```

DB 961 GCTCATTAAGAGCTAGAGACAGGTTTATTAATCAATAGAGATGAATGTAGAA 1020
QY 1021 AGCTGAATTTCTGATTAATAAGCAAAACAGCTGGCTTAGCAAGAGGCAACATTAAGAT 1080
DB 1021 AGCTGAATTTCTGATTAATAAGCAAAACAGCTGGCTTAGCAAGAGGCAACATTAAGAT 1080
QY 1081 GGGCTGGAAGTAAGAAACATGTATGTAGGCGGACTCCGACACAGAAAAAGGTAG 1140
DB 1081 GGGCTGGAAGTAAGAAACATGTATGTAGGCGGACTCCGACACAGAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATAGACACAAACTGCTAGT 1200
DB 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATAGACACAAACTGCTAGT 1200
QY 1201 CAGAGAACTGTAGAGATCTGAAGATGTTCTTGATTAACCTTAATAGAGCATTCAG 1260
DB 1201 CAGAGAACTGTAGAGATCTGAAGATGTTCTTGATTAACCTTAATAGAGCATTCAG 1260
QY 1261 AAGTTAATGAGTGTGTTTCCAGAAAGTATGAACTGTAGGTTCTGATGACTCAGATG 1320
DB 1261 AAGTTAATGAGTGTGTTTCCAGAAAGTATGAACTGTAGGTTCTGATGACTCAGATG 1320
QY 1321 GGGAGTCTGAATCAAAATGCCAAAGTACTGATGTATTGACGTTCTTAATAGAGTATG 1380
DB 1321 GGGAGTCTGAATCAAAATGCCAAAGTACTGATGTATTGACGTTCTTAATAGAGTATG 1380
QY 1381 AATATTCGTGTTCTTCAAGAGAAATAGACTTACTGAGGCGAGTATCTCATAGGCTTAA 1440
DB 1381 AATATTCGTGTTCTTCAAGAGAAATAGACTTACTGAGGCGAGTATCTCATAGGCTTAA 1440
QY 1441 TATGTAAAGTGAAGAGTCTCCTCAATCAGTAGAGATTAATTTGAAGCAAAATAT 1500
DB 1441 TATGTAAAGTGAAGAGTCTCCTCAATCAGTAGAGATTAATTTGAAGCAAAATAT 1500
QY 1501 TTGGGAAACCTATTCGAGAAAGCAAGCCCTCCCACTTAAGCATGTAACGAAATAT 1560
DB 1501 TTGGGAAACCTATTCGAGAAAGCAAGCCCTCCCACTTAAGCATGTAACGAAATAT 1560
QY 1561 TAAATTAAGAGCAATTTGTTACTGAGCACAGATTAACAAGAGCGTCCCTCAAAATA 1620
DB 1561 TAAATTAAGAGCAATTTGTTACTGAGCACAGATTAACAAGAGCGTCCCTCAAAATA 1620
QY 1621 AATTAAAGCTTAAAGAGAGCTTACATCAGGCTTCTCATCTGAGAGATTTATCAAGAA 1680
DB 1621 AATTAAAGCTTAAAGAGAGCTTACATCAGGCTTCTCATCTGAGAGATTTATCAAGAA 1680
QY 1681 CAGATTTGGCAGTTCAAAAGACTCCTGAATATGAATTCAGAGGAACTTAACCAAGGAG 1740
DB 1681 CAGATTTGGCAGTTCAAAAGACTCCTGAATATGAATTCAGAGGAACTTAACCAAGGAG 1740
QY 1741 AGAATGTCAAGTATGAATATTACTAATAGTGGTCAATGAGAAATTAACAAAGGTGAT 1800
DB 1741 AGAATGTCAAGTATGAATATTACTAATAGTGGTCAATGAGAAATTAACAAAGGTGAT 1800
QY 1801 CTATTCAAGATGAGAAAAATCTTAACCAATTAAGATATCTCGAAAAAGATCTGCTTCA 1860
DB 1801 CTATTCAAGATGAGAAAAATCTTAACCAATTAAGATATCTCGAAAAAGATCTGCTTCA 1860
QY 1861 AAAGGAAAGCTGAACCTATTAAGCAGCAGTATTAAGCAATATGAGAACTCGAATTAATAT 1920
DB 1861 AAAGGAAAGCTGAACCTATTAAGCAGCAGTATTAAGCAATATGAGAACTCGAATTAATAT 1920
QY 1921 ACAATTCAAAAAGCACTTAAAGAAATAGGCTGAGAGAGAGTCTTACAGGCAATATTC 1980
DB 1921 ACAATTCAAAAAGCACTTAAAGAAATAGGCTGAGAGAGAGTCTTACAGGCAATATTC 1980
QY 1981 ATGGCTTGAACATGATGATGATTAAGAAATTAAGCCCACTAATTTACTGAAATTC 2040
DB 1981 ATGGCTTGAACATGATGATGATTAAGAAATTAAGCCCACTAATTTACTGAAATTC 2040
QY 2041 TTGATAGTGTCTTACAGAGTGAAGAGTAAGAAAAAGTCAACCAAGTCCAGTCA 2100
DB 2041 TTGATAGTGTCTTACAGAGTGAAGAGTAAGAAAAAGTCAACCAAGTCCAGTCA 2100

```

QY	2101	GGCAGCAGACAGAAACCTTACAACTCATGTGGAAGGTAAAGAACTGTGCACCTGAGACCAAGAGA	2160
Db	2101	GGCAGCAGACAGAAACCTTACAACTCATGTGGAAGGTAAAGAACTGTGCACCACTGGAGCCAAAGAGA	2160
QY	2161	GTAACAAGCCAAATGAACAGACAACTGAAAAGACATGACAGTGAATCTTCCAGAGCTGA	2220
Db	2161	GTAACAAGCCAAATGAACAGACAACTGAAAAGACATGACAGTGAATCTTCCAGAGCTGA	2220
QY	2221	AGTTAACAAATGCACTGTGTCTTTACTAAGTGTGTTAAATPACAGTGAACCTTAAGAAT	2280
Db	2221	AGTTAACAAATGCACTGTGTCTTTACTAAGTGTGTTAAATPACAGTGAACCTTAAGAAT	2280
QY	2281	TTTGCAATCCGACTGACCTTCCAAAGACAAAGAAAGAAAGAACTGAAACAGTTAAAGTGT	2340
Db	2281	TTTGCAATCCGACTGACCTTCCAAAGACAAAGAAAGAAAGAACTGAAACAGTTAAAGTGT	2340
QY	2341	CTAATTAATGCTGAAGACCCCAAAAGATCTCATGTTAAGTGGAGAAAGGGTTTTCGAACTG	2400
Db	2341	CTAATTAATGCTGAAGACCCCAAAAGATCTCATGTTAAGTGGAGAAAGGGTTTTCGAACTG	2400
QY	2401	AAAGATCTGTAGAGAGTACAGTATTTTCATTGTGTACTGGTACTGATTAATGCACTAGG	2460
Db	2401	AAAGATCTGTAGAGAGTACAGTATTTTCATTGTGTACTGGTACTGATTAATGCACTAGG	2460
QY	2461	AAAGTATCTGCTGTAAGTGAAGTATGACACTGAGGGAAGGCAAAAACAGAACCAATTAAT	2520
Db	2461	AAAGTATCTGCTGTAAGTGAAGTATGACACTGAGGGAAGGCAAAAACAGAACCAATTAAT	2520
QY	2521	GTGTGAGTCAAGTGTGCAGCACTTTGAAAACCCCAAGGACCTAATTCATGTTGTTCCAAAG	2580
Db	2521	GTGTGAGTCAAGTGTGCAGCACTTTGAAAACCCCAAGGACCTAATTCATGTTGTTCCAAAG	2580
QY	2581	ATAATTAAGAAATGACACAGAAAGGCTTTAAGTATCCATTGGAGACATGAAGTTAACACAGTC	2640
Db	2581	ATAATTAAGAAATGACACAGAAAGGCTTTAAGTATCCATTGGAGACATGAAGTTAACACAGTC	2640
QY	2641	GGGAACACAGCATTGAAAATGGAGAGAAGTGAATGCTCAGTATTTGCAGAAATCAT	2700
Db	2641	GGGAACACAGCATTGAAAATGGAGAGAAGTGAATGCTCAGTATTTGCAGAAATCAT	2700
QY	2701	TCAAGGTTTCAAAACGGCAGCACTTCTGCTGTTTCAAAATCCAGGAAATGCGAAGAGG	2760
Db	2701	TCAAGGTTTCAAAACGGCAGCACTTCTGCTGTTTCAAAATCCAGGAAATGCGAAGAGG	2760
QY	2761	AATGTGCAACATTTCTGTGCCACTGCTGGTCTTTAAAGAAACAAAGTCCAAAGTCACTT	2820
Db	2761	AATGTGCAACATTTCTGTGCCACTGCTGGTCTTTAAAGAAACAAAGTCCAAAGTCACTT	2820
QY	2821	TTGAAATGTGAACAAAGGAAGAAATATCAAGAAAGATGAGTCTAATATCAGCTGTAC	2880
Db	2821	TTGAAATGTGAACAAAGGAAGAAATATCAAGAAAGATGAGTCTAATATCAGCTGTAC	2880
QY	2881	AGACAGTTAATATCTACTGCAAGGCTTCTGCTGGTGGTGTCAAGAAAGATPACCAAGTTGATA	2940
Db	2881	AGACAGTTAATATCTACTGCAAGGCTTCTGCTGGTGGTGTCAAGAAAGATPACCAAGTTGATA	2940
QY	2941	ATGCCAAATGATGATACAAAGAGGCTCTAGGTTTGTCTATCATCTCAAGTTGAGAGCA	3000
Db	2941	ATGCCAAATGATGATACAAAGAGGCTCTAGGTTTGTCTATCATCTCAAGTTGAGAGCA	3000
QY	3001	ACGAAACTGGACATTAATCTCCAAATTAACATGAGACTTTTACAAACCCATATCGTATAC	3060
Db	3001	ACGAAACTGGACATTAATCTCCAAATTAACATGAGACTTTTACAAACCCATATCGTATAC	3060
QY	3061	CACCACTTTTCCCATCAAGTCAATTTGTTAAACTTAATGTAAAGAAAAATCTGTAGAGG	3120
Db	3061	CACCACTTTTCCCATCAAGTCAATTTGTTAAACTTAATGTAAAGAAAAATCTGTAGAGG	3120
QY	3121	AAAACTTTGAGGAACATTCAATGTGCACCTGAAAGAGAAATGGGAATGAGAACATTTCCAA	3180
Db	3121	AAAACTTTGAGGAACATTCAATGTGCACCTGAAAGAGAAATGGGAATGAGAACATTTCCAA	3180

QY	3181	GTACAGTAGACAACTTTCGCCGTATATACATTAGAGAAAATGTTTTAAAGAACCCAGCT	3240
Db	3181	GTACAGTAGACAACTTTCGCCGTATATACATTAGAGAAAATGTTTTAAAGAACCCAGCT	3240
QY	3241	CAGCAATTAATTAAGAACTAGAGTCCACTACTTAATGAAGTGGGCTCCAGTTTAATGAA	3300
Db	3241	CAGCAATTAATTAAGAACTAGAGTCCACTACTTAATGAAGTGGGCTCCAGTTTAATGAA	3300
QY	3301	TAGGTTCCAGTAGTAAAAACATTCAAGCAGAACTAGTAGAAGAGAGGGCCAAAATTTGA	3360
Db	3301	TAGGTTCCAGTAGTAAAAACATTCAAGCAGAACTAGTAGAAGAGAGGGCCAAAATTTGA	3360
QY	3361	ATGCTATCTTAGATTTAGGGTTTTGCACCTGAGGCTTATAAACAAAGCTTCTCTGAA	3420
Db	3361	ATGCTATCTTAGATTTAGGGTTTTGCACCTGAGGCTTATAAACAAAGCTTCTCTGAA	3420
QY	3421	GTAATTGTACATCTCGTAATTAAGAAAGCAAGATTAAGAAAGTGGTTCAGACTGTGA	3480
Db	3421	GTAATTGTACATCTCGTAATTAAGAAAGCAAGATTAAGAAAGTGGTTCAGACTGTGA	3480
QY	3481	ATACAGATTTCTCCATATCTGATTTTCAGATTACTTAGAACACGCTATGGGAAGTAGTC	3540
Db	3481	ATACAGATTTCTCCATATCTGATTTTCAGATTACTTAGAACACGCTATGGGAAGTAGTC	3540
QY	3541	ATGCATCTCAGGTTGTTCTGAGACACCTGATGACCTGTGTAGATGATGATGTAATTAAG	3600
Db	3541	ATGCATCTCAGGTTGTTCTGAGACACCTGATGACCTGTGTAGATGATGATGTAATTAAG	3600
QY	3601	AAGATACATGTTTGTGCTGAATAATGACATTAAGAAAGTGTGCTGTTTTAGCAAAAGCG	3660
Db	3601	AAGATACATGTTTGTGCTGAATAATGACATTAAGAAAGTGTGCTGTTTTAGCAAAAGCG	3660
QY	3661	TCCAGAAAGGAGAGGCTTAGCAGAGAGTCCCTAGCCCTTACACCATACATTTGGCTCAGG	3720
Db	3661	TCCAGAAAGGAGAGGCTTAGCAGAGAGTCCCTAGCCCTTACACCATACATTTGGCTCAGG	3720
QY	3721	GTTACCCGAAGAGGGCCCAAGAAATTAAGTCTCTCAGAAAGAACCTTACTAGTAGAGATG	3780
Db	3721	GTTACCCGAAGAGGGCCCAAGAAATTAAGTCTCTCAGAAAGAACCTTACTAGTAGAGATG	3780
QY	3781	AAGACCTTCCGCTCCACACACTGTTATTTGGTAAAGTAAACAAATATACCTTCAGT	3840
Db	3781	AAGACCTTCCGCTCCACACACTGTTATTTGGTAAAGTAAACAAATATACCTTCAGT	3840
QY	3841	CTACAGAGCATAGACACGTTGCTCTACCCAGTGTCTGTCTAAGAACACAGAGAGAAATTAAT	3900
Db	3841	CTACAGAGCATAGACACGTTGCTCTACCCAGTGTCTGTCTAAGAACACAGAGAGAAATTAAT	3900
QY	3901	TATCATTTGAAGATTAAGCTTAATATGACTGCACTAACACAGTAAATTTGGCAAGGCATCTC	3960
Db	3901	TATCATTTGAAGATTAAGCTTAATATGACTGCACTAACACAGTAAATTTGGCAAGGCATCTC	3960
QY	3961	AGGAACATCACCCTTAGTAGAGAAACAAATGTTCTGTAGCTTTTCTTCACAGTGCA	4020
Db	3961	AGGAACATCACCCTTAGTAGAGAAACAAATGTTCTGTAGCTTTTCTTCACAGTGCA	4020
QY	4021	GTTGAATTGGAAGACTGTGACTGCAATATCAACACCCAGAGATCTTTTCTTGATTTGGTCTT	4080
Db	4021	GTTGAATTGGAAGACTGTGACTGCAATATCAACACCCAGAGATCTTTTCTTGATTTGGTCTT	4080
QY	4081	CCAAACAAATGAGGCATCAGTCTGAAAACCCAGGAGTTGCTCTGAGTGACAAAGGAATTTGG	4140
Db	4081	CCAAACAAATGAGGCATCAGTCTGAAAACCCAGGAGTTGCTCTGAGTGACAAAGGAATTTGG	4140
QY	4141	TTTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAAAGCA	4200
Db	4141	TTTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAAAGCA	4200
QY	4201	TGGAATTCAAATTTAGGTGAAGCAGACATCTGGGTGTGAGAGTGAAGAAACAAGGCTCTGAAG	4260
Db	4201	TGGAATTCAAATTTAGGTGAAGCAGACATCTGGGTGTGAGAGTGAAGAAACAAGGCTCTGAAG	4260
QY	4261	ACTGTCAGGGCTTATCCCTTCAGAGTACATTTTAACCACTCAGACAAGGATACATGTC	4320


```

Db 4261 ACTGTCAGGGCTATCCCTCTCAGAGTGACATTTAAACACATCAGAGAGGGATACCATC 4320
QY 4321 AACATACCTGTAAGCTCCAGAGGAAATGGCGAACTAGAACTGTTGTAAGAACAC 4380
Db 4321 AACATACCTGTAAGCTCCAGAGGAAATGGCGAACTAGAACTGTTGTAAGAACAC 4380
QY 4381 ATGGAGGACGACCTTCTAAGAGCTACCTCTCATTAAGTGAAGTCTTCTGAGCTGAG 4440
Db 4381 ATGGAGGACGACCTTCTAAGAGCTACCTCTCATTAAGTGAAGTCTTCTGAGCTGAG 4440
QY 4441 ACCGCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTAACTTACACGAAAGTA 4500
Db 4441 ACCGCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTAACTTACACGAAAGTA 4500
QY 4501 GTGATATACCTATTAAGCCAGAAATCCAGAGGCTTTCGCTGACAAAGTTGAGGTGCTG 4560
Db 4501 GTGATATACCTATTAAGCCAGAAATCCAGAGGCTTTCGCTGACAAAGTTGAGGTGCTG 4560
QY 4561 CAGATAGTTCTACCAAGTAAATAAAGAACAGAGAGTGGAAAGTCAATCCCTCTTAAT 4620
Db 4561 CAGATAGTTCTACCAAGTAAATAAAGAACAGAGAGTGGAAAGTCAATCCCTCTTAAT 4620
QY 4621 GCCCATCATTTAGATAGTATAGTGTGATGATGATGAGAGGAGCAACAGCTGGAAG 4740
Db 4621 GCCCATCATTTAGATAGTATAGTGTGATGATGATGAGAGGAGCAACAGCTGGAAG 4740
QY 4681 ACTACCCATCTCAAGAGAGAGCTCATTAAGTGTGATGATGAGAGGAGCAACAGCTGGAAG 4740
Db 4681 ACTACCCATCTCAAGAGAGAGCTCATTAAGTGTGATGATGATGAGAGGAGCAACAGCTGGAAG 4740
QY 4741 AGTGTGGGCCACAGAGATTTGAACGGAACATCTTACTTCCAGAGCAAGATCTAGAGGGA 4800
Db 4741 AGTGTGGGCCACAGAGATTTGAACGGAACATCTTACTTCCAGAGCAAGATCTAGAGGGA 4800
QY 4801 CCCCTTACCTGGAAATCTGGAATCAGCCCTTCTCTGATGAGACCCCTGAATCTGATCTCTG 4860
Db 4801 CCCCTTACCTGGAAATCTGGAATCAGCCCTTCTCTGATGAGACCCCTGAATCTGATCTCTG 4860
QY 4861 AAGACAGAGCCCGAGAGTCACTGCTGTGGCAACATACATCTTCAACCTCTGATTTGA 4920
Db 4861 AAGACAGAGCCCGAGAGTCACTGCTGTGGCAACATACATCTTCAACCTCTGATTTGA 4920
QY 4921 AAGTTCCTCCAAATTAAGTTCAGAAATCTGCCAGAGTCCAGCTGCTCTCATATCTACTG 4980
Db 4921 AAGTTCCTCCAAATTAAGTTCAGAAATCTGCCAGAGTCCAGCTGCTCTCATATCTACTG 4980
QY 4981 ATACTGGGTATATGATGATGAGAAAGTGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 5040
Db 4981 ATACTGGGTATATGATGATGAGAAAGTGGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 5040
QY 5041 CTTTCAAGAAAGGCTCAACAAAGAAATGTCATGCTGTGCTGCTGAGCCGAGAGGAG 5100
Db 5041 CTTTCAAGAAAGGCTCAACAAAGAAATGTCATGCTGTGCTGCTGAGCCGAGAGGAG 5100
QY 5101 AATTATGCTGCTGTACAGTTGCCAGAAAAACACCATCATCTTAATCTAATCTAATTA 5160
Db 5101 AATTATGCTGCTGTACAGTTGCCAGAAAAACACCATCATCTTAATCTAATCTAATTA 5160
QY 5161 CTGAGAGAGACTCATGTTGTTATGAAAAACAGATGCTGATGTTGTTGTTGTAAGGAGAC 5220
Db 5161 CTGAGAGAGACTCATGTTGTTATGAAAAACAGATGCTGATGTTGTTGTTGTAAGGAGAC 5220
QY 5221 TGAATATTTTCTGAGAAATGCGGAGAGAAATGGGTAGTATGCTATTTGCGGTGACCC 5280
Db 5221 TGAATATTTTCTGAGAAATGCGGAGAGAAATGGGTAGTATGCTATTTGCGGTGACCC 5280
QY 5281 AGTCTATTAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCTGAGAGAGAGTGTGG 5340
Db 5281 AGTCTATTAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCTGAGAGAGAGTGTGG 5340
QY 5341 TCATATGAGAAACCACCAAGTCCAAAGCAGAGAGAGATCCAGAGCAAGAAAGATCT 5400
Db 5341 TCATATGAGAAACCACCAAGTCCAAAGCAGAGAGAGATCCAGAGCAAGAAAGATCT 5400

```

```

Db 5341 TCATATGAGAAACCACCAAGTCCAAAGCAGAGAGAGATCCAGAGCAAGAAAGATCT 5400
QY 5401 TCAGGGGCTGAAATCTGTTGCTATGAGCCCTTACCAACATGCCAGATCACTGG 5460
Db 5401 TCAGGGGCTGAAATCTGTTGCTATGAGCCCTTACCAACATGCCAGATCACTGG 5460
QY 5461 AATGATGATACAGCTGTGTGCTGCTTCTGTGTGTAAGAGACCTTCAATCACTG 5520
Db 5461 AATGATGATACAGCTGTGTGCTGCTTCTGTGTGTAAGAGACCTTCAATCACTG 5520
QY 5521 GCACAGGTGTCACCAATTTGTTGTGTGACGCCAGATGCTGTGACAGAGACAAATGGCT 5580
Db 5521 GCACAGGTGTCACCAATTTGTTGTGTGACGCCAGATGCTGTGACAGAGACAAATGGCT 5580
QY 5581 TCATATGATGAGAGAGATGTTGTGAGAGCAGCTGTGTGTGACCCAGAGAGTGGTGTGACA 5640
Db 5581 TCATATGATGAGAGAGATGTTGTGAGAGCAGCTGTGTGTGACCCAGAGAGTGGTGTGACA 5640
QY 5641 GTGTAGCACTTACAGAGTGCAGAGAGCTGACACCTAAGTATACCCAGATCCGCCACA 5700
Db 5641 GTGTAGCACTTACAGAGTGCAGAGAGCTGACACCTAAGTATACCCAGATCCGCCACA 5700
QY 5701 GCCACTACTGA 5711
Db 5701 GCCACTACTGA 5711

```

RESULT 2

US-08-825-487A-3
Sequence 3, Application US/08825487A

GENERAL INFORMATION:

Patent No. 6048689
APPLICANT: Murphy, Patricia D.
APPLICANT: White, Marga B.
TITLE OF INVENTION: METHODS FOR IDENTIFYING VARIATIONS IN POLYNUCLEOTIDE SEQUE
NUMBER OF SEQUENCES: 110
CORRESPONDENCE ADDRESS:
ADDRESS: Howrey & Simon
STREET: 1299 Pennsylvania Avenue., N.W.
CITY: Washington,
STATE: DC
COUNTRY: USA

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/825,487A
FILING DATE: 28-MAR-1997
CLASSIFICATION: 435
PRIOR APPLICATION DATA:

APPLICATION NUMBER: PCT/US98/060002
FILING DATE: 26-Mar-1998

CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Albert P. Halluin

REGISTRATION NUMBER: 25,227

TELECOMMUNICATION INFORMATION:

REFERENCE/DOCKET NUMBER: 05371.0012.999

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 5711 base pairs

TYPE: nucleic acid

STRANDEDNESS: not relevant

TOPOLOGY: linear

MOLECULE TYPE: cDNA

ORGANISM: Homo sapiens

STRAIN: BRCAL

POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-825-487A-3

Query Match 100.0%; Score 5709.4; DB 3; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5710; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
OY 1 AGCTGCTGAGACTTCCTGAGACCCCGACACAGGCTGTGGGTTTCTCAGATTAACGTGGCC 60
DB 1 AGCTGCTGAGACTTCCTGAGACCCCGACACAGGCTGTGGGTTTCTCAGATTAACGTGGCC 60
OY 61 CTTGGCTCAGAGGCGCTTCCACCTCTGCTGGGTAAGTCAATTTGGAAGAAAGAA 120
DB 61 CTTGGCTCAGAGGCGCTTCCACCTCTGCTGGGTAAGTCAATTTGGAAGAAAGAA 120
OY 121 TGGATTATCTGCTCTTGGCGTTGAAGAGTACAAATGTCAATTAATGCTATGACAGAAA 180
DB 121 TGGATTATCTGCTCTTGGCGTTGAAGAGTACAAATGTCAATTAATGCTATGACAGAAA 180
OY 181 TCTTGAGTGTCCCATCTGTCTGAGGTGATCAAGAACCTGTCTCCAAAGGTGTGACC 240
DB 181 TCTTGAGTGTCCCATCTGTCTGAGGTGATCAAGAACCTGTCTCCAAAGGTGTGACC 240
OY 241 ACATATTTTGCATAATTTTGCATGCTGAACCTCTCACACAGAAAGAGGCGCTTGCACGT 300
DB 241 ACATATTTTGCATAATTTTGCATGCTGAACCTCTCACACAGAAAGAGGCGCTTGCACGT 300
OY 301 GTCTTTATGTAGAATGATATTAACCAAAAGAGCGCTACAGAAAGTACAGATTTATGTC 360
DB 301 GTCTTTATGTAGAATGATATTAACCAAAAGAGCGCTACAGAAAGTACAGATTTATGTC 360
OY 361 AACTTGTGAAGAGCTATTTGAAAATCATTGTGCTTTTACGTTGACACAGGTTTGGAGT 420
DB 361 AACTTGTGAAGAGCTATTTGAAAATCATTGTGCTTTTACGTTGACACAGGTTTGGAGT 420
OY 421 ATGCAACAGCTATATTTTGCATAAAAGAAATTAACCTCTGCAACATCTTAAGAAAGATG 480
DB 421 ATGCAACAGCTATATTTTGCATAAAAGAAATTAACCTCTGCAACATCTTAAGAAAGATG 480
OY 481 AAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTGCCAAAAGACTTCTACAGAGTG 540
DB 481 AAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTGCCAAAAGACTTCTACAGAGTG 540
OY 541 AACCAGAAATCTCTCTTGCAGGAAACAGTCTCAGTGTCCAACTCTTAACCTTGGAA 600
DB 541 AACCAGAAATCTCTCTTGCAGGAAACAGTCTCAGTGTCCAACTCTTAACCTTGGAA 600
OY 601 CTGTGAGAACTGTGAGACAAAGAGCGGATACAACTCAAAAGAGCTGTCTACATTTG 660
DB 601 CTGTGAGAACTGTGAGACAAAGAGCGGATACAACTCAAAAGAGCTGTCTACATTTG 660
OY 661 AATTGGAGTCTGATTTCTCTGAAGATACCGTTAATTAAGCAACTTATTGCAAGTGTGGAG 720
DB 661 AATTGGAGTCTGATTTCTCTGAAGATACCGTTAATTAAGCAACTTATTGCAAGTGTGGAG 720
OY 721 ATCAAGAAATGTGTACAAATCACCCCTCAAGGAAACAGGAGATGAATTCAGTTTGGATTCTG 780
DB 721 ATCAAGAAATGTGTACAAATCACCCCTCAAGGAAACAGGAGATGAATTCAGTTTGGATTCTG 780
OY 781 CAAAAAGGCTGCTGTGAATTTTCTGAGAGGAGTGAACAAATCTGAACATCTACATTCAC 840
DB 781 CAAAAAGGCTGCTGTGAATTTTCTGAGAGGAGTGAACAAATCTGAACATCTACATTCAC 840
OY 841 CCAGTAATATGATTTGAACACCACTGAGAAAGCGTGCAGCTGAGAGCATCCAGAAAAGT 900
DB 841 CCAGTAATATGATTTGAACACCACTGAGAAAGCGTGCAGCTGAGAGCATCCAGAAAAGT 900
OY 901 ATCAGGAGTGTCTTCTCAAACTTGCATGTGAGAGCCATGTGGCACAATAATCTACTGCCA 960
DB 901 ATCAGGAGTGTCTTCTCAAACTTGCATGTGAGAGCCATGTGGCACAATAATCTACTGCCA 960
```

```
OY 961 GCTCATTAAGCATGAGACAGCAGTATTATTACTCACTAAAGCAGATGAATGTAGAAA 1020
DB 961 GCTCATTAAGCATGAGACAGCAGTATTATTACTCACTAAAGCAGATGAATGTAGAAA 1020
OY 1021 AGGCTGAATTTCTGTATAATAAAGCAACACCTGTGCTTACCAAGAGACCAATACAGAT 1080
DB 1021 AGGCTGAATTTCTGTATAATAAAGCAACACCTGTGCTTACCAAGAGACCAATACAGAT 1080
OY 1081 GGGCTGGAAGTAAAGAAATGTATGATAGCGGACTCCACGACACAGAAAAAAGGTG 1140
DB 1081 GGGCTGGAAGTAAAGAAATGTATGATAGCGGACTCCACGACACAGAAAAAAGGTG 1140
OY 1141 ATCTGAATCTATCCCTGTGTGAGAGAAAAAGTAATGAATGAGCAAAATCGCCATGCT 1200
DB 1141 ATCTGAATCTATCCCTGTGTGAGAGAAAAAGTAATGAATGAGCAAAATCGCCATGCT 1200
OY 1201 CAGAAATCTAGAGTACTGAAGATGTTCTTGATTAACACTAATATAGCAGCATTGACA 1260
DB 1201 CAGAAATCTAGAGTACTGAAGATGTTCTTGATTAACACTAATATAGCAGCATTGACA 1260
OY 1261 AAGTTAATGAGTGTTCACAGAGTGAAGTACTGTAGTCTGATGCTACATGATG 1320
DB 1261 AAGTTAATGAGTGTTCACAGAGTGAAGTACTGTAGTCTGATGCTACATGATG 1320
OY 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGTGATGATTTGGACGTTTAAATGAGTATG 1380
DB 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGTGATGATTTGGACGTTTAAATGAGTATG 1380
OY 1381 AATATTCGTGTTCTTCAGAGAAATAGACTTACTGCGCAGTATCCTCATGAGGCTTTAA 1440
DB 1381 AATATTCGTGTTCTTCAGAGAAATAGACTTACTGCGCAGTATCCTCATGAGGCTTTAA 1440
OY 1441 TATGTAAAGTAAAGAGTTCCTCCTCAATTCAGTAGAGTATATGTAAGCAAAATAT 1500
DB 1441 TATGTAAAGTAAAGAGTTCCTCCTCAATTCAGTAGAGTATATGTAAGCAAAATAT 1500
OY 1501 TTGGGAAACCTATCGAAGAAAGGCAAGGCTCCCAACTTAAGCCATGTAAGTAAATC 1560
DB 1501 TTGGGAAACCTATCGAAGAAAGGCAAGGCTCCCAACTTAAGCCATGTAAGTAAATC 1560
OY 1561 TAATTAAGGACATTTGTTACTGAGCCACAGATATATACAAAGCGTCCCTCACAAATA 1620
DB 1561 TAATTAAGGACATTTGTTACTGAGCCACAGATATATATACAAAGCGTCCCTCACAAATA 1620
OY 1621 AATTAAGGCTAAAGAGAGACTATCAATGAGGCTTATCTGAGATTTATCAAGAAAG 1680
DB 1621 AATTAAGGCTAAAGAGAGACTATCAATGAGGCTTATCTGAGATTTATCAAGAAAG 1680
OY 1681 CAGATTTGGCAGTTCAAAAAGACTCCTGGAATGATTAATAGGGAATACCAAAAGGAGC 1740
DB 1681 CAGATTTGGCAGTTCAAAAAGACTCCTGGAATGATTAATAGGGAATACCAAAAGGAGC 1740
OY 1741 AGAATGCTCAAGTGAATATTTACTAATAGTGTATGATGAGATTAACAAAGGTGATT 1800
DB 1741 AGAATGCTCAAGTGAATATTTACTAATAGTGTATGATGAGATTAACAAAGGTGATT 1800
OY 1801 CTATTCAAGATGAGAAAAATCTTAACCCATGTGAATCACTCCAAAAAGATGTGCTTCA 1860
DB 1801 CTATTCAAGATGAGAAAAATCTTAACCCATGTGAATCACTCCAAAAAGATGTGCTTCA 1860
OY 1861 AAGCAAGAGCTAAGCTATTAAGCAGAGATTAAGCAATGTGAACCTCGAATTAATATTC 1920
DB 1861 AAGCAAGAGCTAAGCTATTAAGCAGAGATTAAGCAATGTGAACCTCGAATTAATATTC 1920
OY 1921 ACAATTCAAAAGCAGCTTAATAAGATAGGCTGAGAGAAAGTCTTCAACAGCATATTC 1980
DB 1921 ACAATTCAAAAGCAGCTTAATAAGATAGGCTGAGAGAAAGTCTTCAACAGCATATTC 1980
OY 1981 ATGCGCTGAATCTAGTACAGTAAATCTTAAGCCACCTTAATGTGTACTGAATTCGAAA 2040
DB 1981 ATGCGCTGAATCTAGTACAGTAAATCTTAAGCCACCTTAATGTGTACTGAATTCGAAA 2040
OY 2041 TTGATAGTGTCTAGCAGTGAAGATTAAGAAAAAAGTAACCAAAATAGCCAGTCA 2100
```

Db	2041	TTGATGATGGTTCCTGACAGTGAAGAGATTAAGAAAAAAGATACAACTTGGCCAGTCA	2100
QY	2101	GGCAGACGAGAAACCTTACAACATCATGAGAGTAAAGAACTGCAACTGGAGCAAGAATG	2160
Db	2101	GGCAGACGAGAAACCTTACAACATCATGAGAGTAAAGAACTGCAACTGGAGCAAGAATG	2160
QY	2161	GTAAACAGCCAAATGAAACAGACAGATGAAAGACATGACATGATCTTCCAGAGCTGA	2220
Db	2161	GTAAACAGCCAAATGAAACAGACAGATGAAAGACATGACATGATCTTCCAGAGCTGA	2220
QY	2221	AGTTAAACAAATGACACTGGTCTTTTAACTAGTGTCAAAATACCACTGAACCTTAAAGAT	2280
Db	2221	AGTTAAACAAATGACACTGGTCTTTTAACTAGTGTCAAAATACCACTGAACCTTAAAGAT	2280
QY	2281	TTGTCAATCTGACCTTCGCAAGAGAGAAAAAGAGAAATATGAAACAGTTAAAGCT	2340
Db	2281	TTGTCAATCTGACCTTCGCAAGAGAGAAAAAGAGAAATATGAAACAGTTAAAGCT	2340
QY	2341	CTAATTAATGCTGAGAGACCCCAAGATCTCATGTTAAAGTGAAGAAAGGTTTTGCAACTG	2400
Db	2341	CTAATTAATGCTGAGAGACCCCAAGATCTCATGTTAAAGTGAAGAAAGGTTTTGCAACTG	2400
QY	2401	AAAGATCTGTAGAGATGACAGTATTATTTGTCGCGATGACGATTAATGCGACTGAG	2460
Db	2401	AAAGATCTGTAGAGATGACAGTATTATTTGTCGCGATGACGATTAATGCGACTGAG	2460
QY	2461	AAAGTATCTCGTTACTGGAAGTTAGACACTTAGGGAAGCAAAAACAGAACCAATTAAT	2520
Db	2461	AAAGTATCTCGTTACTGGAAGTTAGACACTTAGGGAAGCAAAAACAGAACCAATTAAT	2520
QY	2521	GTGTGAGTCAGTGTGACAGCATTTGAAABCCCAAGGACATAATTCATGTTGTTCCAAAG	2580
Db	2521	GTGTGAGTCAGTGTGACAGCATTTGAAABCCCAAGGACATAATTCATGTTGTTCCAAAG	2580
QY	2581	ATTAATAGAAATGACACAGAAGGCTTTAATCTCATTTGGGACATGAAGTTAAACAGATC	2640
Db	2581	ATTAATAGAAATGACACAGAAGGCTTTAATCTCATTTGGGACATGAAGTTAAACAGATC	2640
QY	2641	GGGAACAACGATTAAGAAATGGAAGAAATGAACTGATGCTCAGTATTGCGAATACAT	2700
Db	2641	GGGAACAACGATTAAGAAATGGAAGAAATGAACTGATGCTCAGTATTGCGAATACAT	2700
QY	2701	TCAGAGTTTCAAAGCCGCAAGTCAATTGCTGTGTTTCAATTCAGAGAAATGCAGAAAGG	2760
Db	2701	TCAGAGTTTCAAAGCCGCAAGTCAATTGCTGTGTTTCAATTCAGAGAAATGCAGAAAGG	2760
QY	2761	AATGGCAACATCTCTGCGCCACATCTGGGCTCCTTAAGAAACAAAGTCCAAAGTCACTT	2820
Db	2761	AATGGCAACATCTCTGCGCCACATCTGGGCTCCTTAAGAAACAAAGTCCAAAGTCACTT	2820
QY	2821	TTGAATGTGAACAAGAGAGAAATATCAGAGAAAGATGAGTCTTAATTCAGGCTGTAC	2880
Db	2821	TTGAATGTGAACAAGAGAGAAATATCAGAGAAAGATGAGTCTTAATTCAGGCTGTAC	2880
QY	2881	AGACAGTTTAATATCATCTGACAGGCTTCTGTGGTTGTCAGAGAAATTAAGCCAGTTGATA	2940
Db	2881	AGACAGTTTAATATCATCTGACAGGCTTCTGTGGTTGTCAGAGAAATTAAGCCAGTTGATA	2940
QY	2941	ATGCCAAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGGCA	3000
Db	2941	ATGCCAAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGGCA	3000
QY	3001	ACGAACCTGAGACTATTCTCAATTAACATGAGCTTTTCAAAACCCATATGCTATAC	3060
Db	3001	ACGAACCTGAGACTATTCTCAATTAACATGAGCTTTTCAAAACCCATATGCTATAC	3060
QY	3061	CACCACTTTTCCCATCAAGTCAATTTGTTAAATGTAAATGTAAAGAAATCTGCTAAGG	3120
Db	3061	CACCACTTTTCCCATCAAGTCAATTTGTTAAATGTAAATGTAAAGAAATCTGCTAAGG	3120
QY	3121	AAAACTTTGAGAAACATTCAATGTCTACCTGAAGAGAAATGGAAATGAGAACTTCCAA	3180

Db	3121	AAAACCTTGAGGACATTCATATGTCACCTCGAAAGAGAAATGGGAAATGAGAACTATCCAA	3180
OY	3181	GTACAGTGGACCAATATTACCCGTAATATACATTAGAGAAATGTTTATTAAGAACGACAGT	3240
Db	3181	GTACAGTGGACCAATATTACCCGTAATATACATTAGAGAAATGTTTATTAAGAACGACAGT	3240
OY	3241	CAGCAATATTAATGAAGTAGGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA	3300
Db	3241	CAGCAATATTAATGAAGTAGGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA	3300
OY	3301	TAGGTTCCAGTATGAAAACATTCGAAAGCAAGCACTAGTAAAGAACAGAGGCCAAATATGA	3360
Db	3301	TAGGTTCCAGTATGAAAACATTCGAAAGCAAGCACTAGTAAAGAACAGAGGCCAAATATGA	3360
OY	3361	ATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGAGCTATTAACAAAGCTCTCCGAGAA	3420
Db	3361	ATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGAGCTATTAACAAAGCTCTCCGAGAA	3420
OY	3421	GTAATTGTAGAATCCTGAAATTAACAAAGCAATATGAGAGAGTACTACAGCTGTAA	3480
Db	3421	GTAATTGTAGAATCCTGAAATTAACAAAGCAATATGAGAGAGTACTACAGCTGTAA	3480
OY	3481	ATACAGATTTCTCCATATCTGATTTGATTAACATTTGAACAGCCTATGGGAAATATGTC	3540
Db	3481	ATACAGATTTCTCTCATATCTGATTTGATTAACATTTGAACAGCCTATGGGAAATATGTC	3540
OY	3541	ATGCACTTCAGGTTTGTTCGAGACACCTGATGACCTGTAGATGATGGTGAATTAAGG	3600
Db	3541	ATGCACTTCAGGTTTGTTCGAGACACCTGATGACCTGTAGATGATGGTGAATTAAGG	3600
OY	3601	AAGATACATGTTTGTGCTGAAAATGACATTAGGAAAGTTCTGCTGTTTTAGCAAAAGCG	3660
Db	3601	AAGATACATGTTTGTGCTGAAAATGACATTAGGAAAGTTCTGCTGTTTTAGCAAAAGCG	3660
OY	3661	TCCAGAAAGGAGAGCTGACAGAGTCCAGCCCTTACCCATACATTTGGCTGACGG	3720
Db	3661	TCCAGAAAGGAGAGCTGACAGAGTCCAGCCCTTACCCATACATTTGGCTGACGG	3720
OY	3721	GTTACCGAGAGAGGGGCCAAGAAATTAAGAGTCCCTCGAAGAGAACTTATCTAGTAGATG	3780
Db	3721	GTTACCGAGAGAGGGGCCAAGAAATTAAGAGTCCCTCGAAGAGAACTTATCTAGTAGATG	3780
OY	3781	AAGAGCTTCCCTGCTTCCAAACCTTGTATTTGGTAAAGTAAACAAATATACCTTCTCAGT	3840
Db	3781	AAGAGCTTCCCTGCTTCCAAACCTTGTATTTGGTAAAGTAAACAAATATACCTTCTCAGT	3840
OY	3841	CTACAGAGGATAGCAACCGTGTACCGAGTGTCTGTCTAAGAACCAAGAGAAATTTAT	3900
Db	3841	CTACAGAGGATAGCAACCGTGTACCGAGTGTCTGTCTAAGAACCAAGAGAAATTTAT	3900
OY	3901	TATCATTTGAAGAATAGCTTAATATGACTGCAGTAACCAAGTAAATATGGCAAAAGCATCTC	3960
Db	3901	TATCATTTGAAGAATAGCTTAATATGACTGCAGTAACCAAGTAAATATGGCAAAAGCATCTC	3960
OY	3961	AGGAACATCACCTTATGATGAGAAACAAATGTCTGTAAGCTGTTTTCTTACAGTGA	4020
Db	3961	AGGAACATCACCTTATGATGAGAAACAAATGTCTGTAAGCTGTTTTCTTACAGTGA	4020
OY	4021	GTTGAATTTGGAAACCTTGACTGCAATATCAAAACCCAGAGATCTTCTTGATTTGGTCTT	4080
Db	4021	GTTGAATTTGGAAACCTTGACTGCAATATCAAAACCCAGAGATCTTCTTGATTTGGTCTT	4080
OY	4081	CCAAACAATGAGGATCAGTCTGTAAGCCAGGGAGTTGGTCTGAGTACAAAGAAATTTGG	4140
Db	4081	CCAAACAATGAGGATCAGTCTGTAAGCCAGGGAGTTGGTCTGAGTACAAAGAAATTTGG	4140
OY	4141	TTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAAAGCA	4200
Db	4141	TTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAAAGCA	4200
OY	4201	TGGATTTCAAACTTAGTGAAGCAGCATCTGGGTGTGAGATGGAACAAGCCTCTCTGAG	4260
Db	4201	TGGATTTCAAACTTAGTGAAGCAGCATCTGGGTGTGAGATGGAACAAGCCTCTCTGAG	4260

TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1 (om13)
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-09-074-476-5

Query Match 100.08; Score 5709.4; DB 3; Length 5711;
Best Local Similarity 100.08; Pred. No. 0;
Matches 5710; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGCTGCTGAGACTCTCTGAGACCCGACACAGGCTGTGGGTTTCTCAGATTAACGTGGCC 60
DB 1 AGCTGCTGAGACTCTCTGAGACCCGACACAGGCTGTGGGTTTCTCAGATTAACGTGGCC 60
QY 61 CTTGCGCTCAGAGGCTTTCACCTCTGCTGGTAAAGTTCAATTGGAACAGAAAGAAA 120
DB 61 CTTGCGCTCAGAGGCTTTCACCTCTGCTGGTAAAGTTCAATTGGAACAGAAAGAAA 120
QY 121 TGGATTTATCTGCTCTTGGCCGTTGAAGAGTACAAAATGTCAATTAATGCTATGCGAATA 180
DB 121 TGGATTTATCTGCTCTTGGCCGTTGAAGAGTACAAAATGTCAATTAATGCTATGCGAATA 180
QY 181 TCTTAGAGTGTCCCTCTGCTGAGTGTGATCAAGAACCTCTCCACAAAGTGTGACC 240
DB 181 TCTTAGAGTGTCCCTCTGCTGAGTGTGATCAAGAACCTCTCCACAAAGTGTGACC 240
QY 241 ACATATTTTGCATAATTTTGCATGCTGAACCTTCTACCCAGAGAAAGGCTTCACACT 300
DB 241 ACATATTTTGCATAATTTTGCATGCTGAACCTTCTACCCAGAGAAAGGCTTCACACT 300
QY 301 GTCCCTTATGTAAGATGATATTAACCAAGAGGCTCAAGAAATGCGAATTTAGTC 360
DB 301 GTCCCTTATGTAAGATGATATTAACCAAGAGGCTCAAGAAATGCGAATTTAGTC 360
QY 361 AACTTGTGAAGAGTATGAAAATCATTTTGTGCTTTCAGCTTACACAGGTTTGAGT 420
DB 361 AACTTGTGAAGAGTATGAAAATCATTTTGTGCTTTCAGCTTACACAGGTTTGAGT 420
QY 421 ATGCAAAACGCTATATTTTGCAAAAGAAATTAACCTCTCCTGAACATCTAAAGATG 480
DB 421 ATGCAAAACGCTATATTTTGCAAAAGAAATTAACCTCTCCTGAACATCTAAAGATG 480
QY 481 AAGTTTCTATCATCAAGATATGGGCTACAGAAACCGTCCAAAAGACTTCTACAGAGTG 540
DB 481 AAGTTTCTATCATCAAGATATGGGCTACAGAAACCGTCCAAAAGACTTCTACAGAGTG 540
QY 541 AACCCGAAATCTCTCTGTCAGAGAAACAGTCTCAGTCCCACTCTTAACCTTGGAA 600
DB 541 AACCCGAAATCTCTCTGTCAGAGAAACAGTCTCAGTCCCACTCTTAACCTTGGAA 600
QY 601 CTGTGAGAACTCTGAGCAAAAGCAGCGATCAACCTCAAAAAGAGCTCTGTACATTTG 660
DB 601 CTGTGAGAACTCTGAGCAAAAGCAGCGATCAACCTCAAAAAGAGCTCTGTACATTTG 660
QY 661 AATTGGGATCGATTTCTTCTGAAATACCGGTAATTAAGCAACTATGCGAGTGAGAG 720
DB 661 AATTGGGATCGATTTCTTCTGAAATACCGGTAATTAAGCAACTATGCGAGTGAGAG 720
QY 721 ATCAAGAATTTGTAACAATCACCCCTCAAGSACAGSAGATGAATCAAGTTTGAATTCG 780
DB 721 ATCAAGAATTTGTAACAATCACCCCTCAAGSACAGSAGATGAATCAAGTTTGAATTCG 780
QY 781 CAAAAGAGGCTCTTGTGAATTTTCTGAGAGGATGTAACTGAAATCTGAAATCTAAC 840
DB 781 CAAAAGAGGCTCTTGTGAATTTTCTGAGAGGATGTAACTGAAATCTGAAATCTAAC 840
QY 841 CCAATTAATTAATTTGAGACACACTGAGAGCGCTGACGCTGAGAGGATCCAGAAAGT 900

DB 841 CCAGTAAATATGATTTGAACACACTGGAAGCGCTGACGCTGAGAGCATCCAGAAAGT 900
QY 901 ATCAGGATAGTCTCTTCAAACTGTGAGAGCCATGAGCAAAATACATCTCCCA 960
DB 901 ATCAGGATAGTCTCTTCAAACTGTGAGAGCCATGAGCAAAATACATCTCCCA 960
QY 961 GCTCATTAACAGCAGAGACAGCTTATTACTACTAAAGACAGATTAATGTAGAAA 1020
DB 961 GCTCATTAACAGCAGAGACAGCTTATTACTACTAAAGACAGATTAATGTAGAAA 1020
QY 1021 AGGCTGAATTCGTATTAATTAAGCAACGCTGCTTACAGAGAGCCATTAACGAT 1080
DB 1021 AGGCTGAATTCGTATTAATTAAGCAACGCTGCTTACAGAGAGCCATTAACGAT 1080
QY 1081 GGGCTGGAAGTAAAGAAACATGTATGTATAGCCGACTCCAGACAGAAAAAGGTAG 1140
DB 1081 GGGCTGGAAGTAAAGAAACATGTATGTATAGCCGACTCCAGACAGAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGAATTAACAGAAACCTGCATGCT 1200
DB 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGAATTAACAGAAACCTGCATGCT 1200
QY 1201 CAGAAATCTTGAATCTGAAGATGTTCTTGGATTAACACTTAATTAAGCAGATTCAGA 1260
DB 1201 CAGAAATCTTGAATCTGAAGATGTTCTTGGATTAACACTTAATTAAGCAGATTCAGA 1260
QY 1261 AAGTTAATGAGTGTGTTTCCAGAAAGTGAATGTTAGTTGATGATCACTACATGATG 1320
DB 1261 AAGTTAATGAGTGTGTTTCCAGAAAGTGAATGTTAGTTGATGATCACTACATGATG 1320
QY 1321 GGGAGTCTGAATCAAAATGCCAAGTACTGATGATTTGAGAGCTTAAATGAGTATGATG 1380
DB 1321 GGGAGTCTGAATCAAAATGCCAAGTACTGATGATTTGAGAGCTTAAATGAGTATGATG 1380
QY 1381 AATATCTGTTCTTCAAGAAATTAAGACTTACGAGGAGTCCCATGAGGCTTTAA 1440
DB 1381 AATATCTGTTCTTCAAGAAATTAAGACTTACGAGGAGTCCCATGAGGCTTTAA 1440
QY 1441 TATGTAAAGTGAAGAGTCTCACTCAAACTAGTAGAGTATATTTGAAGACAAATAT 1500
DB 1441 TATGTAAAGTGAAGAGTCTCACTCAAACTAGTAGAGTATATTTGAAGACAAATAT 1500
QY 1501 TTGGGAAAACTATGCGAAGAGCAAGCTCCCAACTTAAGCAATGTAACGAAAAATC 1560
DB 1501 TTGGGAAAACTATGCGAAGAGCAAGCTCCCAACTTAAGCAATGTAACGAAAAATC 1560
QY 1561 TAAATATGAGCAATTTGTTCTGAGCAGAGATTAACAAAGAGCGCCCTCACAATA 1620
DB 1561 TAAATATGAGCAATTTGTTCTGAGCAGAGATTAACAAAGAGCGCCCTCACAATA 1620
QY 1621 AATTAAAGCCTTAAAGAGAGACTACATCAGGCTTCACTCTGAGATTTATCAAGAAAG 1680
DB 1621 AATTAAAGCCTTAAAGAGAGACTACATCAGGCTTCACTCTGAGATTTATCAAGAAAG 1680
QY 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCGAGGAACCTAAACCAAGGAGC 1740
DB 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCGAGGAACCTAAACCAAGGAGC 1740
QY 1741 AGAATGGTCAAGTATGATATTTCTATATGTGTCTATGAGATTAACCAAGAGTGAT 1800
DB 1741 AGAATGGTCAAGTATGATATTTCTATATGTGTCTATGAGATTAACCAAGAGTGAT 1800
QY 1801 CTATTCAGAAATGAGAAAAATCTTAACCAATAGATCACTCGAAAAAGATCTGCTTCA 1860
DB 1801 CTATTCAGAAATGAGAAAAATCTTAACCAATAGATCACTCGAAAAAGATCTGCTTCA 1860
QY 1861 AAACGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATGATGAATGGAATTAATATCC 1920
DB 1861 AAACGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATGATGAATGGAATTAATATCC 1920
QY 1921 ACAATTCAAAAGCCTTAAAGAAATGAGTGTGAGGAGAGTCTTACAGGCAATTC 1980

OY	4141	TTTTGAGATGAAGAAAGAGAAACGGGCTTGAAAGAAATATCAACAGCAAGCA	4200
Db	4141	TTTCAGATGATGAAGAAAGAGACGGGCTTGAGAGAAATATCAACAGCAAGCA	4200
OY	4201	TGATATCAACTAGTGAGAGACGATCTGGGTGTGAGATGAAACAAGCCTCTGTAAG	4260
Db	4201	TGATATCAACTAGTGAGAGACGATCTGGGTGTGAGATGAAACAAGCCTCTGTAAG	4260
OY	4261	ACTGCTCAGGGGCTATCCCTCTCAGAGTGACATTTTAAACCATCTCAGACAGGATACCATGC	4320
Db	4261	ACTGCTCAGGGGCTATCCCTCTCAGAGTGACATTTTAAACCATCTCAGAGGATACCATGC	4320
OY	4321	AACATTAACCTATTAAGCTCCAGCAGAGAAATGGCGAACTPAGAACTGTGTAGAACGC	4380
Db	4321	AACATTAACCTATTAAGCTCCAGCAGAGAAATGGCGAACTPAGAACTGTGTAGAACGC	4380
OY	4381	ATGGAGGACCACTCTTAACAGCTAACCTTCATCATTAAGTACTCTCTCCCTTGAGG	4440
Db	4381	ATGGAGGACCACTCTTAACAGCTAACCTTCATCATTAAGTACTCTCTCCCTTGAGG	4440
OY	4441	ACCTGCGAAATCCAGAACAAAGCACATCAGAAAAAGCATTTAACTTCACAGAAAAGTA	4500
Db	4441	ACCTGCGAAATCCAGAACAAAGCACATCAGAAAAAGCATTTAACTTCACAGAAAAGTA	4500
OY	4501	GTGAATACCCCTATTAAGCCAGAAATCCAGAAAGGCTTTGCGTACAGAAAGTTTAAAGTGTG	4560
Db	4501	GTGAATACCCCTATTAAGCCAGAAATCCAGAAAGGCTTTGCGTACAGAAAGTTTAAAGTGTG	4560
OY	4561	CAGATAGTCTTACAGAGTAAAAATTAAGAACCCAGAGAGTGAAGAGTCACTCCCTCTAAAT	4620
Db	4561	CAGATAGTCTTACAGAGTAAAAATTAAGAACCCAGAGAGTGAAGAGTCACTCCCTCTAAAT	4620
OY	4621	GCCCATCATTTAGATGATAGTGTGTACATGACACAGTGTCTGCGGAGCTTCAGAAATGAA	4680
Db	4621	GCCCATCATTTAGATGATAGTGTGTACATGACACAGTGTCTGCGGAGCTTCAGAAATGAA	4680
OY	4681	ACTACCCATCTCAAGAGAGGAGCTCAATTAAAGTTGTGATGTGAAGAGCAACAGGTGAAAG	4740
Db	4681	ACTACCCATCTCAAGAGAGGAGCTCAATTAAAGTTGTGATGTGAAGAGCAACAGGTGAAAG	4740
OY	4741	AGTCTGGGCCCACAGATTTGAAGGAAACATCTTACTTGGCCAAAGCAAGATCTAAGAGGAA	4800
Db	4741	AGTCTGGGCCCACAGATTTGAAGGAAACATCTTACTTGGCCAAAGCAAGATCTAAGAGGAA	4800
OY	4801	CCCCCTTACCTTGGAATCTTGGAATCAAGCCTCTTCTGTGATGACCTGGAATCTGATCTTCTG	4860
Db	4801	CCCCCTTACCTTGGAATCTTGGAATCAAGCCTCTTCTGTGATGACCTGGAATCTGATCTTCTG	4860
OY	4861	AAGACAGAGCCCCAGAGTCAAGCTGTGTGGCAACATACACTTCAACCTCTGCAATTGA	4920
Db	4861	AAGACAGAGCCCCAGAGTCAAGCTGTGTGGCAACATACACTTCAACCTCTGCAATTGA	4920
OY	4921	AAGTTCCCAATTAAGATTGSCAAATCTGCCAGAGTCCAGCTGCTGCTCATCTACTG	4980
Db	4921	AAGTTCCCAATTAAGATTGSCAAATCTGCCAGAGTCCAGCTGCTGCTCATCTACTG	4980
OY	4981	ATACTGCTGGGTATTAATGCAATGGAAGAAATGTGACAGAGGAGAGACCGAATTTGACAG	5040
Db	4981	ATACTGCTGGGTATTAATGCAATGGAAGAAATGTGACAGAGGAGAGACCGAATTTGACAG	5040
OY	5041	CTTCAACAGAAAGGCTCAACAAAAGAAATGTCCATGAGTGTGTGCGCTCAACCCCAAGAG	5100
Db	5041	CTTCAACAGAAAGGCTCAACAAAAGAAATGTCCATGAGTGTGTGCGCTCAACCCCAAGAG	5100
OY	5101	AATTTATGCTGTGTATACAGTTTCCAGAAAACCAACATCACTTAACTTAATTAATTA	5160
Db	5101	AATTTATGCTGTGTATACAGTTTCCAGAAAACCAACATCACTTAACTTAATTAATTA	5160
OY	5161	CTGAAGAGACTACTCATGTTGTTATGAAAAAGATGCTGAGTTGTGTGTGAACGAGAC	5220
Db	5161	CTGAAGAGACTACTCATGTTGTTATGAAAAAGATGCTGAGTTGTGTGTGAACGAGAC	5220
OY	5221	TGAAATATTTTCTTAGGAATTTGCGGAGAGAAATGGGTAGTTAGCTATTTCTGGGTGACCC	5280

Db	5221	TGAAATATTTTCTAGGAATTCGGGAGGAAAATGGTAGTACTATTTCTGGGTGACC	5280
OY	5281	AGTCTATTAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAGAGGAGATGTGG	5340
Db	5281	AGTCTATTAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAGAGGAGATGTGG	5340
OY	5341	TCAAATGGAAGAAACCCAGAGTCCAAAGCGAGCAAGAAATGCCAGACAGAAAGATCT	5400
Db	5341	TCAAATGGAAGAAACCCAGAGTCCAAAGCGAGCAAGAAATGCCAGACAGAAAGATCT	5400
OY	5401	TCAGGGGGCTAGAAAATCTGTGCTAATGTGGGCCCTTACACAATGATGCCACAGATCAACTGG	5460
Db	5401	TCAGGGGGCTAGAAAATCTGTGCTAATGTGGGCCCTTACACAATGATGCCACAGATCAACTGG	5460
OY	5461	AATGATGATAGACGCTGTGTGCTCTTGTGTGAAGAGCTTTCATCATTCACCCCTTG	5520
Db	5461	AATGATGATAGACGCTGTGTGCTCTTGTGTGAAGAGCTTTCATCATTCACCCCTTG	5520
OY	5521	GCACAGGTGCCACCCCAATGTGTGTGTGACGCCAGATGCTGCTGGACAGAGGACAAATGTCT	5580
Db	5521	GCACAGGTGCCACCCCAATGTGTGTGTGACGCCAGATGCTGCTGGACAGAGGACAAATGTCT	5580
OY	5581	TCCATGCAATTTGGGAGAGATGTGTGAGGACCTGTGTGAGCCGACAGATGGGTGTGGACA	5640
Db	5581	TCCATGCAATTTGGGAGAGATGTGTGAGGACCTGTGTGAGCCGACAGATGGGTGTGGACA	5640
OY	5641	GTGTGACACTGTACAGAGTCCAGAGAGCTGAGACACTTACCTGATATACCCACAGATCCCCACA	5700
Db	5641	GTGTGACACTGTACAGAGTCCAGAGAGCTGAGACACTTACCTGATATACCCACAGATCCCCACA	5700
OY	5701	GGCAGTACTGGA 5711	
Db	5701	GGCAGTACTGGA 5711	

RESULT 4
 US-08-658-322-1
 Sequence 1, Application US/08658322
 Patent No. 5869245
 GENERAL INFORMATION:
 APPLICANT: Yeung, Anthony T.
 TITLE OF INVENTION: Mismatch Endonuclease And Its Use in
 TITLE OF INVENTION: Identifying Mutations In Targeted Polynucleotide Strands
 NUMBER OF SEQUENCES: 13
 CORRESPONDENCE ADDRESS:
 ADDRESSEE: Dann, Dorfman, Herrell and Skillman, P.C.
 STREET: 1601 Market Street, Suite 720
 CITY: Philadelphia
 STATE: PA
 COUNTRY: USA
 ZIP: 19103-2307
 COMPUTER READABLE FORM:
 MEDIUM TYPE: floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/658,322
 FILING DATE: 05-JUN-1996
 CLASSIFICATION: 435
 ATTORNEY/AGENT INFORMATION:
 NAME: Hagan, Patrick J.
 REGISTRATION NUMBER: 27,643
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (215) 563-4100
 TELEFAX: (215) 563-4044
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 5711 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: double
 TOPOLOGY: not relevant

MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
US-08-658-322-1

Query Match 99.9%; Score 5707.8; DB 2; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```
QY 1 AGCTCGCTGAGACTCTCTGAGACCCGACACAGGCTGTGGGGTTTCTCAGATTAAGTGGGC 60
DB 1 AGCTCGCTGAGACTCTCTGAGACCCGACACAGGCTGTGGGGTTTCTCAGATTAAGTGGGC 60
QY 61 CCGCGCTCAGAGAGCCCTTCCACCTGCTGTGGTAAAGTCAATGGAACAGAAAGAAA 120
DB 61 CCGCGCTCAGAGAGCCCTTCCACCTGCTGTGGTAAAGTCAATGGAACAGAAAGAAA 120
QY 121 TGAATTTATCTGCTCTTGGGTTGAGAGTACAAAATGTCATTAAATGCTATGAGAAA 180
DB 121 TGAATTTATCTGCTCTTGGGTTGAGAGTACAAAATGTCATTAAATGCTATGAGAAA 180
QY 181 TCTTAGAGTCCCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAAGTGTACC 240
DB 181 TCTTAGAGTCCCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAAGTGTACC 240
QY 241 ACATATTTTGCATTTTGCATGCTGAACTCTCAACCAAGAAAGGCGCTTCAAGT 300
DB 241 ACATATTTTGCATTTTGCATGCTGAACTCTCAACCAAGAAAGGCGCTTCAAGT 300
QY 301 GTCCTTTATGTAAAGATGATATACCAAAAAGAGCCCTACAAAGAAAGTACGATTTAGTC 360
DB 301 GTCCTTTATGTAAAGATGATATACCAAAAAGAGCCCTACAAAGAAAGTACGATTTAGTC 360
QY 361 AACTGTGGAAGAGCTATGAAAAATCATTTGTGCTTTTCAAGCTTGACACAGGTTTGAAGT 420
DB 361 AACTGTGGAAGAGCTATGAAAAATCATTTGTGCTTTTCAAGCTTGACACAGGTTTGAAGT 420
QY 421 ATGCAAAACAGCTATATTTTGCAAAAGAAAGAAATTAATCTCTCGAATCACTAAAGATG 480
DB 421 ATGCAAAACAGCTATATTTTGCAAAAGAAAGAAATTAATCTCTCGAATCACTAAAGATG 480
QY 481 AAGTTCTATCATCAAGATATGAGGCTACAGAAACCGTGCACAAAAGACTTCTACAGATG 540
DB 481 AAGTTCTATCATCAAGATATGAGGCTACAGAAACCGTGCACAAAAGACTTCTACAGATG 540
QY 541 AACCAGAAATCCTCTCTTCCAGAGAAACAGCTCATGTGTCACACTCTTAACCTTGGAA 600
DB 541 AACCAGAAATCCTCTCTTCCAGAGAAACAGCTCATGTGTCACACTCTTAACCTTGGAA 600
QY 601 CTGTGAGAACTCTGAGACAAAGCAGGATACAAACCTCAAAAAGAGCTGTCTACATTTG 660
DB 601 CTGTGAGAACTCTGAGACAAAGCAGGATACAAACCTCAAAAAGAGCTGTCTACATTTG 660
QY 661 AATTGGATCTGATCTTCTGAAAGATACCGTTAATAAGGCACTTATGACGTGTGGAG 720
DB 661 AATTGGATCTGATCTTCTGAAAGATACCGTTAATAAGGCACTTATGACGTGTGGAG 720
QY 721 ATCAAGAAATGTTACAAATCACCCTCAAGGATGGAATAGTTGGATCTG 780
DB 721 ATCAAGAAATGTTACAAATCACCCTCAAGGATGGAATAGTTGGATCTG 780
QY 781 CAAAAAAGGCTGTGTAATTTTCTGAGACGGATGTAACAATTAAGTCAATCAATCAAC 840
DB 781 CAAAAAAGGCTGTGTAATTTTCTGAGACGGATGTAACAATTAAGTCAATCAATCAAC 840
QY 841 CCAATTAATATGATTTGAACACCACTGAGAAAGGTGACGTGAGAGGCATCCAGAAAAGT 900
DB 841 CCAATTAATATGATTTGAACACCACTGAGAAAGGTGACGTGAGAGGCATCCAGAAAAGT 900
QY 901 ATCAGGATAGTCTGTTTCAAACTGTGATGTGAGGCAATGTGACAAATTAATCAATGCA 960
DB 901 ATCAGGATAGTCTGTTTCAAACTGTGATGTGAGGCAATGTGACAAATTAATCAATGCA 960
```

```
QY 961 GCTCATTACAGCATGAGAACGAGCTTTATTAATCACTAAAGCAGATGAATGATAGAAA 1020
DB 961 GCTCATTACAGCATGAGAACGAGCTTTATTAATCACTAAAGCAGATGAATGATAGAAA 1020
QY 1021 AGGCTGAATTTCTGTAATTAAGCAAGCAGCTGTGCTTACAGAGGCAACATCAATGAT 1080
DB 1021 AGGCTGAATTTCTGTAATTAAGCAAGCAGCTGTGCTTACAGAGGCAACATCAATGAT 1080
QY 1081 GGGCTGGAAGTAAAGAAACATGTATATATAGCCGACTCCAGCAGAAAAAGGTAG 1140
DB 1081 GGGCTGGAAGTAAAGAAACATGTATATATAGCCGACTCCAGCAGAAAAAGGTAG 1140
QY 1141 ATCGAATGCTGATCCCTGTGTGAGAAAAAGATGAATTAACAGAAACTGTCATGCT 1200
DB 1141 ATCGAATGCTGATCCCTGTGTGAGAAAAAGATGAATTAACAGAAACTGTCATGCT 1200
QY 1201 CAGAGAACTCTAGAGATCTGAAAGATGTCCTTGGATTAACATAATAGCAGCATTCAGA 1260
DB 1201 CAGAGAACTCTAGAGATCTGAAAGATGTCCTTGGATTAACATAATAGCAGCATTCAGA 1260
QY 1261 AAGTTAATGAGTGTTCAGAAAGTATACCTGTTAGTTGATGATCTACATGATG 1320
DB 1261 AAGTTAATGAGTGTTCAGAAAGTATGATGAATGTTAGTTGATGATCTACATGATG 1320
QY 1321 GGGAGTCTGATCAAAATGCCAAAGTACGTGATGATGATGAGCGTTCTAAATAGGTAGTG 1380
DB 1321 GGGAGTCTGATCAAAATGCCAAAGTACGTGATGATGATGAGCGTTCTAAATAGGTAGTG 1380
QY 1381 AATATCTGCTTCTCAGAGAAATAGACTTACTGAGCAGTATCTCATAGGCTTTAA 1440
DB 1381 AATATCTGCTTCTCAGAGAAATAGACTTACTGAGCAGTATCTCATAGGCTTTAA 1440
QY 1441 TATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATGAATTTGAAGCAAAATAT 1500
DB 1441 TATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATGAATTTGAAGCAAAATAT 1500
QY 1501 TTGGGAAACCTATCGGAAAGCAAGCCCTCCCACTTAAGCATGATTAATCAATATC 1560
DB 1501 TTGGGAAACCTATCGGAAAGCAAGCCCTCCCACTTAAGCATGATTAATCAATATC 1560
QY 1561 TAAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCAAAATA 1620
DB 1561 TAAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCAAAATA 1620
QY 1621 AATTAAAGCCTTAAAGAGAGACCTACATCAGGCTTCACTCTGAGAGATTTTATCAAGAA 1680
DB 1621 AATTAAAGCCTTAAAGAGAGACCTACATCAGGCTTCACTCTGAGAGATTTTATCAAGAA 1680
QY 1681 CAGATTTGCGAGTTCAAAAGACCTCTGAAATGATTAATCAAGGAACTAACCAAGGAGC 1740
DB 1681 CAGATTTGCGAGTTCAAAAGACCTCTGAAATGATTAATCAAGGAACTAACCAAGGAGC 1740
QY 1741 AGAATGCTCAAGTATGATTAATTAAGTGTGATGAGAAATTAAGTAAAGTATTC 1800
DB 1741 AGAATGCTCAAGTATGATTAATTAAGTGTGATGAGAAATTAAGTAAAGTATTC 1800
QY 1801 CTATTCAGATGAGAAAAATCTTAACCAATAGATATCTGAAAAAGAAATCTGCTTTCA 1860
DB 1801 CTATTCAGATGAGAAAAATCTTAACCAATAGATATCTGAAAAAGAAATCTGCTTTCA 1860
QY 1861 AAAGGAAAGCTGAACCTATAGCAGCAGTAAAGCATATGGAACCTGAAATTAATATTC 1920
DB 1861 AAAGGAAAGCTGAACCTATAGCAGCAGTAAAGCATATGGAACCTGAAATTAATATTC 1920
QY 1921 ACAATTCAAAAGACCTTAAAGAAATAGGCTGAGAGAGATCTTCTACAGGAGCATATTC 1980
DB 1921 ACAATTCAAAAGACCTTAAAGAAATAGGCTGAGAGAGATCTTCTACAGGAGCATATTC 1980
QY 1981 ATGCGCTTGAACCTAGTAGTAGTAAGAAATTAAGCCACCTAATTTGATGAAATTTGCA 2040
DB 1981 ATGCGCTTGAACCTAGTAGTAGTAAGAAATTAAGCCACCTAATTTGATGAAATTTGCA 2040
QY 2041 TTGATAGTGTCTAGACAGTAAGAGATAAAGAAAAAGTCAACCAATGCAAGTCA 2100
```

Db	2041	TTGATAGTGTCTTACGAGTGAAGATTAAGAAAAAATACAACTGACAGTCA	2100
OY	2101	GGCAGCAGAAAACTTACACTCATGAGAGTAAAGAACTGCAACTGGACCAGAGA	2160
Db	2101	GGCAGCAGAAAACTTACACTCATGAGAGTAAAGAACTGCAACTGGACCAGAGA	2160
OY	2161	GTAACAAACCAATGAAGACAAAGTAATAACATGACAGATACCTTCCACAGCTGA	2220
Db	2161	GTAACAAACCAATGAAGACAAAGTAATAACATGACAGATACCTTCCACAGCTGA	2220
OY	2221	AGTTAACAAATGACACCTGGTCTTCTTACTAAGTGTTCAAATACCAAGTAAAT	2280
Db	2221	AGTTAACAAATGACACCTGGTCTTCTTACTAAGTGTTCAAATACCAAGTAAAT	2280
OY	2281	TTGTCAATCCCTAGCCTTCCAGAGAGAAAAAGAGAACTGAAACAGTTAAAGTGT	2340
Db	2281	TTGTCAATCCCTAGCCTTCCAGAGAGAAAAAGAGAACTGAAACAGTTAAAGTGT	2340
OY	2341	CTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAGAAAGGTTTGGAACTG	2400
Db	2341	CTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAGAAAGGTTTGGAACTG	2400
OY	2401	AAAGATCTGTAGAGATGACAGTATTTTCATTGTGTACTGTGACTGATTTAGGCACTAGG	2460
Db	2401	AAAGATCTGTAGAGATGACAGTATTTTCATTGTGTACTGTGACTGATTTAGGCACTAGG	2460
OY	2461	AAAGATCTGCTTACTGGAAGTTTAGCATCTAGGAGAGGCAAAAAACGAACCAATTAAT	2520
Db	2461	AAAGATCTGCTTACTGGAAGTTTAGCATCTAGGAGAGGCAAAAAACGAACCAATTAAT	2520
OY	2521	GTGTGAGTCACTGTGACAGATTTGAAAAACCCCAAGGCACTAATTCATGTTGTTCCAAG	2580
Db	2521	GTGTGAGTCACTGTGACAGATTTGAAAAACCCCAAGGCACTAATTCATGTTGTTCCAAG	2580
OY	2581	ATTAATAGAAATGACACAGAGGCTTTAAGTATTCATTTGGGACATGAAGTTAACACAGTGC	2640
Db	2581	ATTAATAGAAATGACACAGAGGCTTTAAGTATTCATTTGGGACATGAAGTTAACACAGTGC	2640
OY	2641	GGGAAACCAAGCATGAGAAATGGAAGAAAGTGAATGCTCAGTATTTTGCAGATACAT	2700
Db	2641	GGGAAACCAAGCATGAGAAATGGAAGAAAGTGAATGCTCAGTATTTTGCAGATACAT	2700
OY	2701	TCAAGGTTTCAAAACGCCGACGTCATTTGCTCTGTTTCAAAATCCAGGAAATGCAAGACAGG	2760
Db	2701	TCAAGGTTTCAAAACGCCGACGTCATTTGCTCTGTTTCAAAATCCAGGAAATGCAAGACAGG	2760
OY	2761	AATGTGCAACATTTCTGCCCCACTCTGGGTCCTTAAAGAAACAAAGTCCAAAGATCACTT	2820
Db	2761	AATGTGCAACATTTCTGCCCCACTCTGGGTCCTTAAAGAAACAAAGTCCAAAGATCACTT	2820
OY	2821	TTGAAATGTGAACAAAGAGAGAAAAATCAAGGAAAGATGAGTCTAATATCAAGCTGTAC	2880
Db	2821	TTGAAATGTGAACAAAGAGAGAAAAATCAAGGAAAGATGAGTCTAATATCAAGCTGTAC	2880
OY	2881	AGACAGTTAATATCTACGACAGGCTTTCCTGTGGTTGGTCAGAAAGATTAAGCCAGTTATA	2940
Db	2881	AGACAGTTAATATCTACGACAGGCTTTCCTGTGGTTGGTCAGAAAGATTAAGCCAGTTATA	2940
OY	2941	ATGCCAAATGTAGTATCAAAAGAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA	3000
Db	2941	ATGCCAAATGTAGTATCAAAAGAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA	3000
OY	3001	ACGAAATCGAGCTATTAATCTCAAAATTAACAATGACCTTTTACAAAAACCCATATCGTATAC	3060
Db	3001	ACGAAATCGAGCTATTAATCTCAAAATTAACAATGACCTTTTACAAAAACCCATATCGTATAC	3060
OY	3061	CACACACTTTTCCCATGAAGTCACTTTGTTAAATTAATGTAAGAAAAAATCTGCTAGAGG	3120
Db	3061	CACACACTTTTCCCATGAAGTCACTTTGTTAAATTAATGTAAGAAAAAATCTGCTAGAGG	3120
OY	3121	AAAACTTTGAGAAACATTCATGTCACTGAGAAAGAAATGGAAATGAGAACATTCGAA	3180
Db	3121	AAAACTTTGAGAAACATTCATGTCACTGAGAAAGAAATGGAAATGAGAACATTCGAA	3180

Dd	3121	AAAACCTTTGAGAACAACTTCAATGTCAACCTGAAAGAGAAATGGAAATATGAAACATTTCCA	3188
Qy	3181	GTACAGTAGACACAAATTAGCCGTAATTAACTTAGAGAAATGTTTTAAAGAACCCACT	3240
Dd	3181	GTACAGTAGACACAAATTAGCCGTAATTAACTTAGAGAAATGTTTTAAAGAACCCACT	3240
Qy	3241	CAGGAATATTTAATAAGTAGTTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA	3300
Dd	3241	CAGGAATATTTAATAAGTAGTTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA	3300
Qy	3301	TAGGTTCCAGTCAAGAAACATTTCAAGAGAACTAGTAGAAACAGAGGCCCAAAATTGA	3360
Dd	3301	TAGGTTCCAGTCAAGAAACATTTCAAGAGAACTAGTAGAAACAGAGGCCCAAAATTGA	3360
Qy	3361	ATGCTATGCTTGAATTAGGGCTTTGCAACCGTAGGCTGTATTAACAAAGTCTCCTGGAA	3420
Dd	3361	ATGCTATGCTTGAATTAGGGCTTTGCAACCGTAGGCTGTATTAACAAAGTCTCCTGGAA	3420
Qy	3421	GTAATTTGAAGCATCTGTAATAATTAAGAACAGAAATATGAAGAGTAGTTCAAGTGTTA	3480
Dd	3421	GTAATTTGAAGCATCTGTAATAATTAAGAACAGAAATATGAAGAGTAGTTCAAGTGTTA	3480
Qy	3481	ATACAGATTTCTCTCCATATCTGATTTAGATTAATTAGAACGCTTATGGAGTAGTC	3540
Dd	3481	ATACAGATTTCTCTCCATATCTGATTTAGATTAATTAGAACGCTTATGGAGTAGTC	3540
Qy	3541	ATGCATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGTGAATAAAGG	3600
Dd	3541	ATGCATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGTGAATAAAGG	3600
Qy	3601	AAGATACTAGTATTGCTGTAATAATGACATTAAGAAAGTTCTGCTGTTTTAGCAAAACG	3660
Dd	3601	AAGATACTAGTATTGCTGTAATAATGACATTAAGAAAGTTCTGCTGTTTTAGCAAAACG	3660
Qy	3661	TCCAGAAAGAGAGGTTAGACAGAGATCTAGGCCCTTACACCATACATTTGGTGGCTAGG	3720
Dd	3661	TCCAGAAAGAGAGGTTAGACAGAGATCTAGGCCCTTACACCATACATTTGGTGGCTAGG	3720
Qy	3721	GTTACCGAAGAGGGGCCAAGAAATTAGAGTCTCTGAGAAAGAACTTAATCTAGTAGAGTAG	3780
Dd	3721	GTTACCGAAGAGGGGCCAAGAAATTAGAGTCTCTCTGAGAAAGAACTTAATCTAGTAGAGTAG	3780
Qy	3781	AAGACCTTCCCTGCTTCCACAACCTGTATTGTGAAGTAAACAAATTAACCTCTCAGT	3840
Dd	3781	AAGACCTTCCCTGCTTCCACAACCTGTATTGTGAAGTAAACAAATTAACCTCTCAGT	3840
Qy	3841	CTACTAGGCAATAGCACCCGTTGCTACCGAGTCTCTGCTTAAGAACACAGAGAGAAATTAT	3900
Dd	3841	CTACTAGGCAATAGCACCCGTTGCTACCGAGTCTCTGCTTAAGAACACAGAGAGAAATTAT	3900
Qy	3901	TATCATTTAAAGATTAAGCTTAAATGACTGCTAGTAACCAAGTAAATATGGCAAAAGCATCTC	3960
Dd	3901	TATCATTTAAAGATTAAGCTTAAATGACTGCTAGTAACCAAGTAAATATGGCAAAAGCATCTC	3960
Qy	3961	AGGAACATCACCTTAGTGAGGAACAAATTTGCTAGAGCTGTTTTCTTCAACAGTCA	4020
Dd	3961	AGGAACATCACCTTAGTGAGGAACAAATTTGCTAGAGCTGTTTTCTTCAACAGTCA	4020
Qy	4021	GTGAATTTGGAAGACTTGACTCCAATATCMAAACCCAGAGATCTTCTTGTGATTTGGTTCTT	4080
Dd	4021	GTGAATTTGGAAGACTTGACTCCAATATCMAAACCCAGAGATCTTCTTGTGATTTGGTTCTT	4080
Qy	4081	CCAAACAATAGAGGATCAGTCTGAAACCCAGGGGTTGCTGTAGTACAAAGAAATTGG	4140
Dd	4081	CCAAACAATAGAGGATCAGTCTGAAACCCAGGGGTTGCTGTAGTACAAAGAAATTGG	4140
Qy	4141	TTTCAGATGATGAAGAAAGAGAACGGGCTTGGAGAAAGAAATATCAAGAAAGCAAAAGCA	4200
Dd	4141	TTTCAGATGATGAAGAAAGAGAACGGGCTTGGAGAAAGAAATATCAAGAAAGCAAAAGCA	4200
Qy	4201	TGATTTCAACTTAAGTGAAGACAGCATCTGGGTGTAGAGTGAACAACAGCTCTCTGAG	4260
Dd	4201	TGATTTCAACTTAAGTGAAGACAGCATCTGGGTGTAGAGTGAACAACAGCTCTCTGAG	4260


```

TELEX:
: INFORMATION FOR SEQ ID NO: 1:
: SEQUENCE CHARACTERISTICS:
:   LENGTH: 5712
:   TYPE: nucleic acid
:   STRANDEDNESS: double
:   TOPOLOGY: linear
:   MOLECULE TYPE: cDNA to mRNA
:   HYPOTHETICAL: no
:   ANTI-SENSE: no
:   ORIGINAL SOURCE:
:     ORGANISM: Homo sapiens
:     INDIVIDUAL ISOLATE:
:     DEVELOPMENTAL STAGE: adult
:     TISSUE TYPE: female breast
:     CELL TYPE: ductal carcinoma in situ, invasive
:     CELL TYPE: breast cancer and normal breast tissue
:     CELL LINE: not derived from a cell line
:   ORGANELLE: no
:   IMMEDIATE SOURCE:
:     LIBRARY: cDNA library derived from human
:     CLONE: obtained using published sequence
:     POSITION IN GENOME:
:     CHROMOSOME/SEGMENT: unknown
:     MAP POSITION: unknown
:     UNITS: unknown
:   FEATURE:
:     NAME/KEY: BRCA1
:     LOCATION: Genbank accession no. U14680
:     IDENTIFICATION METHOD: microscopicallydirected
:     OTHER INFORMATION: gene encoding BRCA1 protein
:     PUBLICATION INFORMATION:
:       AUTHORS: Miki, Y., et. al.
:       TITLE: A strong candidate gene for the breast and
:       TITLE: ovarian cancer susceptibility gene BRCA1.
:       JOURNAL: Science
:       VOLUME: 266
:       PAGES: 66-71
:       DATE: 1994
:     RELEVANT RESIDUES IN SEQ ID NO: 1:
:   US-08-603-753D-1
:
Query Match          99.9%; Score 5707.8; DB 2; Length 5712;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

```

Db 361 AACCTGTTGAAGAGCTATTAATCAATTTGTGCTTTTCAGCTTGACACAGGTTTGAGT 420
Qy 421 ATGCAACAGCTATATTTTCCAAAAAGAAATTAATCTCTGACATCTAATAAGATG 480
Db 421 ATGCAACAGCTATATTTTCCAAAAAGAAATTAATCTCTGACATCTAATAAGATG 480
Qy 481 AAGTTTATATCAATCCAAAGTATGGGCTACAGAAACCGTGCCAAAGACCTCTACAGAGT 540
Db 481 AAGTTTATATCAATCCAAAGTATGGGCTACAGAAACCGTGCCAAAGACCTCTACAGAGT 540
Qy 541 AACCCGAAATCCCTCCCTGAGGAAACCACTCTCAGTCCATCTCAACCTGTAACCTGGA 600
Db 541 AACCCGAAATCCCTCCCTGAGGAAACCACTCTCAGTCCATCTCAACCTGTAACCTGGA 600
Qy 601 CTGTGAGAACTCTGAGACAAAGAGCGGATACCACTCAAAAGACCTCTGTCTACATTTG 660
Db 601 CTGTGAGAACTCTGAGACAAAGAGCGGATACCACTCAAAAGACCTCTGTCTACATTTG 660
Qy 661 AATTGGATCTGATTTCTTGAGATACCTTAATTAAGCACTTAATGCACTTAATGAGTGGAG 720
Db 661 AATTGGATCTGATTTCTTGAGATACCTTAATTAAGCACTTAATGCACTTAATGAGTGGAG 720
Qy 721 ATCAAGATTTGTTCAAAATCACCCCTCAAGGAAACGAGGATGAATGATTTGATTTG 780
Db 721 ATCAAGATTTGTTCAAAATCACCCCTCAAGGAAACGAGGATGAATGATTTGATTTG 780
Qy 781 CAAAAAGGCTGCTGTGTAATTTTCTGAGAGGATGTACAAATTAATCAATCATCAAC 840
Db 781 CAAAAAGGCTGCTGTGTAATTTTCTGAGAGGATGTACAAATTAATCAATCATCAAC 840
Qy 841 CCAGTAATTAATGATTTGAAACCACTGAGAAAGCTGTGAGAGGATCCAGAAAGT 900
Db 841 CCAGTAATTAATGATTTGAAACCACTGAGAAAGCTGTGAGAGGATCCAGAAAGT 900
Qy 901 ATCAGGATGTTCTGTTTCAAACTGTCATGTGAGGACCATGTGGCACAATATCATGTCCA 960
Db 901 ATCAGGATGTTCTGTTTCAAACTGTCATGTGAGGACCATGTGGCACAATATCATGTCCA 960
Qy 961 GCTCATTAACAGCATGAGAACGACGATTATTACTACTAAGACAGATTAATGTAGAAA 1020
Db 961 GCTCATTAACAGCATGAGAACGACGATTATTACTACTAAGACAGATTAATGTAGAAA 1020
Qy 1021 AGCGTAATTTCTGTAATTAAGCAACAGCTGCTTGAAGAGGCAATCAATCAAGAT 1080
Db 1021 AGCGTAATTTCTGTAATTAAGCAACAGCTGCTTGAAGAGGCAATCAATCAAGAT 1080
Qy 1081 GGGCTGAAGTAAGAAACATGTAATATAGCGGACTCCAGACAGAAAGAAAGGTAG 1140
Db 1081 GGGCTGAAGTAAGAAACATGTAATATAGCGGACTCCAGACAGAAAGAAAGGTAG 1140
Qy 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGAATTAAGCAAGAACTGCATGCT 1200
Db 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGAATTAAGCAAGAACTGCATGCT 1200
Qy 1201 CAGAGAAATCCCTAGAGATACGTAATGATGTTCTTGATTAACCTTAATATAGAGATTCA 1260
Db 1201 CAGAGAAATCCCTAGAGATACGTAATGATGTTCTTGATTAACCTTAATATAGAGATTCA 1260
Qy 1261 AAGTTAATGAGTGGTTTCCAGAGATGATGAAGCTTGAAGTGTGATGATCAATCATGAG 1320
Db 1261 AAGTTAATGAGTGGTTTCCAGAGATGATGAAGCTTGAAGTGTGATGATCAATCATGAG 1320
Qy 1321 GGGAGTCTGAATCAAAATGCCAAATAGCTGATTAATGAGCTTAATGAGAGTATG 1380
Db 1321 GGGAGTCTGAATCAAAATGCCAAATAGCTGATTAATGAGCTTAATGAGAGTATG 1380
Qy 1381 AATATTTCTGTTCTTCCAGAGAAATTAATGATTAATGAGCTTAATGAGAGTATG 1440
Db 1381 AATATTTCTGTTCTTCCAGAGAAATTAATGATTAATGAGCTTAATGAGAGTATG 1440
Qy 1441 TATGTAAGAGTAAGAGTTCACCTCAATCAAGTATTAATGAGAGTATTAATGAGAGTAT 1500
Db 1441 TATGTAAGAGTAAGAGTTCACCTCAATCAAGTATTAATGAGAGTATTAATGAGAGTAT 1500

```

```
QY 1501 TTGGAAAACCTATCGGAAGAGGACCCCTCCCACTTAAAGCATGTAACTGAAAATC 1560
    |||||
Db 1501 TTGGAAAACCTATCGGAAGAGGACCCCTCCCACTTAAAGCATGTAACTGAAAATC 1560
QY 1561 TAAATTATAGAGCATTTTGTACTAGGACACAGATATATCAAGAGCGTCCCTCACAATA 1620
    |||||
Db 1561 TAAATTATAGAGCATTTTGTACTAGGACACAGATATATCAAGAGCGTCCCTCACAATA 1620
QY 1621 AATTAAAGCGTAAAGAGACCTATCAGGCTTTCATCTGAGGATTTTATCAAGAAG 1680
    |||||
Db 1621 AATTAAAGCGTAAAGAGACCTATCAGGCTTTCATCTGAGGATTTTATCAAGAAG 1680
QY 1681 CAGATTGGCAGTCAAAAGACCTCTGAATATGATTAATCAGGGACTACCAAGCGAGC 1740
    |||||
Db 1681 CAGATTGGCAGTCAAAAGACCTCTGAATATGATTAATCAGGGACTACCAAGCGAGC 1740
QY 1741 AGAATGGTCAAGTGATGAATATTTACTAATAGTGTCTATGAGAAATAAACAAAGGTATT 1800
    |||||
Db 1741 AGAATGGTCAAGTGATGAATATTTACTAATAGTGTCTATGAGAAATAAACAAAGGTATT 1800
QY 1801 CTATTGCAATGAGAAAAATCTTAACCAATAGATATCTGAAAAAGATCTGCTTTCA 1860
    |||||
Db 1801 CTATTGCAATGAGAAAAATCTTAACCAATAGATATCTGAAAAAGATCTGCTTTCA 1860
QY 1861 AAACGAAGCTGAACCTATAGCAGCAGTATTAACCAATATGSAACCTGSAATTAATTC 1920
    |||||
Db 1861 AAACGAAGCTGAACCTATAGCAGCAGTATTAACCAATATGSAACCTGSAATTAATTC 1920
QY 1921 ACAATTCAAAAAGCCTTAAAAAGAAATAGCTGAGAGAGAACTTCTACAGGCAATTC 1980
    |||||
Db 1921 ACAATTCAAAAAGCCTTAAAAAGAAATAGCTGAGAGAGAACTTCTACAGGCAATTC 1980
QY 1981 ATGGCTTGACACTAGTGTAGTGAATCTAAGCCCACTAATTTGACTGAATTCGAAA 2040
    |||||
Db 1981 ATGGCTTGACACTAGTGTAGTGAATCTAAGCCCACTAATTTGACTGAATTCGAAA 2040
QY 2041 TTGATAGTTTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCGACTCA 2100
    |||||
Db 2041 TTGATAGTTTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCGACTCA 2100
QY 2101 GGCACAGCAGAAACCTCAACTCATGTGAGAGGTAAAGAACTGCAACTGAGCCAAAGAA 2160
    |||||
Db 2101 GGCACAGCAGAAACCTCAACTCATGTGAGAGGTAAAGAACTGCAACTGAGCCAAAGAA 2160
QY 2161 GTAAACAAGCCAAATGAACACAGCACTAAGAAAGACATGACAGTACTTTCCAGAGCTGA 2220
    |||||
Db 2161 GTAAACAAGCCAAATGAACACAGCACTAAGAAAGACATGACAGTACTTTCCAGAGCTGA 2220
QY 2221 AGTTAACAAATGCACCTGCTTCTTTACTAAGTGTTCAAATACAGGAACTTAAAGAT 2280
    |||||
Db 2221 AGTTAACAAATGCACCTGCTTCTTTACTAAGTGTTCAAATACAGGAACTTAAAGAT 2280
QY 2281 TTGTCAATCTAGGCTTCAAGAGAAAGAAAAAGAAAGAACTAGAAACAGTTAAAGTGT 2340
    |||||
Db 2281 TTGTCAATCTAGGCTTCAAGAGAAAGAAAAAGAAAGAACTAGAAACAGTTAAAGTGT 2340
QY 2341 CTATATATGCTGAAGACCCCAAGATCTCATGTTAATGGAAGAAAGGTTTTCGAACTG 2400
    |||||
Db 2341 CTATATATGCTGAAGACCCCAAGATCTCATGTTAATGGAAGAAAGGTTTTCGAACTG 2400
QY 2401 AAAGATCTGAGAGAGTGAAGTATTTGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2460
    |||||
Db 2401 AAAGATCTGAGAGAGTGAAGTATTTGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2460
QY 2461 AAAGATCTGAGAGAGTGAAGTATTTGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2520
    |||||
Db 2461 AAAGATCTGAGAGAGTGAAGTATTTGATGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2520
QY 2521 GTGTGATCAGTGTGAGCATTTGGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 2580
    |||||
Db 2521 GTGTGATCAGTGTGAGCATTTGGAAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 2580
```

```
QY 2581 ATATAGAAATGACACAGAAAGCTTTAAGTATCATTTGGAGCATGAAGTTAACACAGTC 2640
    |||||
Db 2581 ATATAGAAATGACACAGAAAGCTTTAAGTATCATTTGGAGCATGAAGTTAACACAGTC 2640
QY 2641 GGGAAACAAGCATGAATGGAAGAAAGTGAATCTGATGCTCAGTATTTGCGAATACAT 2700
    |||||
Db 2641 GGGAAACAAGCATGAATGGAAGAAAGTGAATCTGATGCTCAGTATTTGCGAATACAT 2700
QY 2701 TCAAGTTTCAAGCGCCAGTCATTTGCTGTTTCAATTCAGAAATGCGAGAGAGG 2760
    |||||
Db 2701 TCAAGTTTCAAGCGCCAGTCATTTGCTGTTTCAATTCAGAAATGCGAGAGAGG 2760
QY 2761 AATGTGCAATTCCTGCCCACCTGCTGCTTAAAGAAACAAAGTCCAAAGTCACTT 2820
    |||||
Db 2761 AATGTGCAATTCCTGCCCACCTGCTGCTTAAAGAAACAAAGTCCAAAGTCACTT 2820
QY 2821 TTGAATGTGAACAAAGAAAGAAATCAAGSAAAGATGATTAATATCAAGCTGTAC 2880
    |||||
Db 2821 TTGAATGTGAACAAAGAAAGAAATCAAGSAAAGATGATTAATATCAAGCTGTAC 2880
QY 2881 AGACAGTTAATATCAGTCAGAGCTTCTGCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2940
    |||||
Db 2881 AGACAGTTAATATCAGTCAGAGCTTCTGCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTG 2940
QY 2941 ATGCCAATGTAGTATCAAGAGAGGCTCTAGGTTTCTCTATCTCAGTTCAGAGCA 3000
    |||||
Db 2941 ATGCCAATGTAGTATCAAGAGAGGCTCTAGGTTTCTCTATCTCAGTTCAGAGCA 3000
QY 3001 ACGAAATGGAATCTATCTCCAAATTAACATGAGCTTTTCAAAACCCATATCTATAC 3060
    |||||
Db 3001 ACGAAATGGAATCTATCTCCAAATTAACATGAGCTTTTCAAAACCCATATCTATAC 3060
QY 3061 CACACCTTTTCCATCAAGTCATTTGTTAAACTAATATGTAAGAAATGCTATACAGG 3120
    |||||
Db 3061 CACACCTTTTCCATCAAGTCATTTGTTAAACTAATATGTAAGAAATGCTATACAGG 3120
QY 3121 AAACTTTGAGGAACATTCATCAATGCTCAGCTGAAAGAAATGGAAGAAAGTCCAA 3180
    |||||
Db 3121 AAACTTTGAGGAACATTCATCAATGCTCAGCTGAAAGAAATGGAAGAAAGTCCAA 3180
QY 3181 GTACAGTGAACACATTAAGCCGTAAATTAACATTAAGAAATGTTTTAAAGAACCGACT 3240
    |||||
Db 3181 GTACAGTGAACACATTAAGCCGTAAATTAACATTAAGAAATGTTTTAAAGAACCGACT 3240
QY 3241 CAAGCAATATTAATGAAGTGTCCAGTACTAATGAAGTGTCCAGTATTAATGAAG 3300
    |||||
Db 3241 CAAGCAATATTAATGAAGTGTCCAGTACTAATGAAGTGTCCAGTATTAATGAAG 3300
QY 3301 TAGGTTCCAGTGAAGAAACATTCACAGCAGAACTAGTAAACAGAGGCGCAAAATTTGA 3360
    |||||
Db 3301 TAGGTTCCAGTGAAGAAACATTCACAGCAGAACTAGTAAACAGAGGCGCAAAATTTGA 3360
QY 3361 ATGCTATGCTTAAATTAAGGAGTTTTCGAACTGAGTCTATTAACAAAGTCTTCTGAA 3420
    |||||
Db 3361 ATGCTATGCTTAAATTAAGGAGTTTTCGAACTGAGTCTATTAACAAAGTCTTCTGAA 3420
QY 3421 GTATATGATGATCCCGAATTAAGAAAGAAAGAAAGTGAAGAAAGTGAAGTGAAGTGA 3480
    |||||
Db 3421 GTATATGATGATCCCGAATTAAGAAAGAAAGAAAGTGAAGAAAGTGAAGTGAAGTGA 3480
QY 3481 ATACAGATTTCTCTCATATCTGATTTCAATATACTAGAAACAGCCATGGAAGTATGTC 3540
    |||||
Db 3481 ATACAGATTTCTCTCATATCTGATTTCAATATACTAGAAACAGCCATGGAAGTATGTC 3540
QY 3541 ATGCAATCTCAGGTTTGTCTGAGACACCTGATGACTGTTAGATGATGTTGAATTAAG 3600
    |||||
Db 3541 ATGCAATCTCAGGTTTGTCTGAGACACCTGATGACTGTTAGATGATGTTGAATTAAG 3600
QY 3601 AAGATATCTATTTTCTGGAAGTGAAGTGAAGAAAGTGTGCTGTTTGAAGAAAGCG 3660
    |||||
Db 3601 AAGATATCTATTTTCTGGAAGTGAAGTGAAGAAAGTGTGCTGTTTGAAGAAAGCG 3660
QY 3661 TCCAGAAAGAGAGCTTAGCAGAGTCTAGCCCTTTCACCCATACATTTGGCTCAGG 3720
    |||||
```

|||||
Db 3661 TCCAGAAAGAGAGCTAGCAGAGTCCAGCCCTTTCACCCATACACATTGGCTCAGG 3720
Qy 3721 GTTACCGAAGGGGGCCAAAGAAATAGATCTCTCAGAAAGAGAACTATATAGTAGAG 3780
Db 3721 GTTACCGAAGGGGGCCAAAGAAATAGATCTCTCAGAAAGAGAACTATATAGTAGAG 3780
Qy 3781 AAGAGCTTCCCTGCTCCCAACACTGTTATTTGTTAAAGTAAACATATACCTCTCAGT 3840
Db 3781 AAGAGCTTCCCTGCTCCCAACACTGTTATTTGTTAAAGTAAACATATACCTCTCAGT 3840
Qy 3841 CTACTAGGCATAGCACCCGTTGCTACCGAGTGTCTGTCTAAGAACACAGAGAGATTTAT 3900
Db 3841 CTACTAGGCATAGCACCCGTTGCTACCGAGTGTCTGTCTAAGAACACAGAGAGATTTAT 3900
Qy 3901 TATCATTTAGAAATAGCTTAAATGAGTACGATACAGAGTATATTTGGCAAGGCACTTC 3960
Db 3901 TATCATTTAGAAATAGCTTAAATGAGTACGATACAGAGTATATTTGGCAAGGCACTTC 3960
Qy 3961 AGGAACATCACCTTAGTAGAGAAACAAATGTTCTGCTAGCTTGTCTTCTCACAGTGA 4020
Db 3961 AGGAACATCACCTTAGTAGAGAAACAAATGTTCTGCTAGCTTGTCTTCTCACAGTGA 4020
Qy 4021 GTGATTTGAGAGACTTGACTGCAATTACAAACACCCAGATCTTTCTTGATGGTCTT 4080
Db 4021 GTGATTTGAGAGACTTGACTGCAATTACAAACACCCAGATCTTTCTTGATGGTCTT 4080
Qy 4081 CCAAAACAATGAGGATCAGTCTGAAAGCCAGGAGTTGTTGATGTCAGAGAAATGG 4140
Db 4081 CCAAAACAATGAGGATCAGTCTGAAAGCCAGGAGTTGTTGATGTCAGAGAAATGG 4140
Qy 4141 TTTCAGATGATGAAGAAAGAGAACGGGCTTGGAAGAAATATCAAGAAAGCAAGCA 4200
Db 4141 TTTCAGATGATGAAGAAAGAGAACGGGCTTGGAAGAAATATCAAGAAAGCAAGCA 4200
Qy 4201 TGGATTCAACTTAGCTGAAGCAGCATCTGGGTGTGAGAGTAAACAGCCGCTCTGAAG 4260
Db 4201 TGGATTCAACTTAGCTGAAGCAGCATCTGGGTGTGAGAGTAAACAGCCGCTCTGAAG 4260
Qy 4261 ACTGCTCAGGCTATCTCTCAGAGTGAATTTAAACCACTCAGCAGAGAGGATACCATG 4320
Db 4261 ACTGCTCAGGCTATCTCTCAGAGTGAATTTAAACCACTCAGCAGAGAGGATACCATG 4320
Qy 4321 AACATTAACCTGATAAAGCTCCAGCAGGAAGTGTGAACCTAGAGCTGTGTGAACAC 4380
Db 4321 AACATTAACCTGATAAAGCTCCAGCAGGAAGTGTGAACCTAGAGCTGTGTGAACAC 4380
Qy 4381 ATGGAGGCGAGCTTCTTAACAGCTACCTTCCATCATATAGTACCTTCTGCGCTTGAG 4440
Db 4381 ATGGAGGCGAGCTTCTTAACAGCTACCTTCCATCATATAGTACCTTCTGCGCTTGAG 4440
Qy 4441 ACCTGCGAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAACTTACAGAAAA 4500
Db 4441 ACCTGCGAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAACTTACAGAAAA 4500
Qy 4501 GTGAATTAACCTGATAAAGCTCCAGCAGGAAGTGTGAACCTAGAGCTGTGTGAAC 4560
Db 4501 GTGAATTAACCTGATAAAGCTCCAGCAGGAAGTGTGAACCTAGAGCTGTGTGAAC 4560
Qy 4561 CAGATAGTTTACCAAGTAAAAATTAAGAACCCAGAGAGTGAAGAGTCACTCCCTTTAAT 4620
Db 4561 CAGATAGTTTACCAAGTAAAAATTAAGAACCCAGAGAGTGAAGAGTCACTCCCTTTAAT 4620
Qy 4621 GCCCATCTTAGATAGTGTGTGATGATGATGATGATGATGATGATGATGATGATGAT 4680
Db 4621 GCCCATCTTAGATAGTGTGTGATGATGATGATGATGATGATGATGATGATGATGAT 4680
Qy 4681 ACTACCATCTCAAGAGAGAGCTCATTAAAGTGTGTGATGATGATGATGATGATGAT 4740
Db 4681 ACTACCATCTCAAGAGAGAGCTCATTAAAGTGTGTGATGATGATGATGATGATGAT 4740
Qy 4741 AGTGTGGCCACAGATTTGAGGAAACATCTTACTTGCAGAGGCAAGATCTAGAGGAA 4800
|||||

Db 4741 AGTGTGGCCACAGATTTGAGGAAACATCTTACTTGCAGAGGCAAGATCTAGAGGAA 4800
Qy 4801 CCCCTTACCTGGAATCTGGAATCAGGCTCTCTCTGATGACCCCTGGAATCTGATCTG 4860
Db 4801 CCCCTTACCTGGAATCTGGAATCAGGCTCTCTCTGATGACCCCTGGAATCTGATCTG 4860
Qy 4861 AAGACAGAGCCCCAGAGTACGCTCGTGTGGCAACATACATCTTCAACCTCTGATGA 4920
Db 4861 AAGACAGAGCCCCAGAGTACGCTCGTGTGGCAACATACATCTTCAACCTCTGATGA 4920
Qy 4921 AAGTCCCAATTTGAAAGTGTGAGAAATCTGCCAGAGTCCAGCTGCTCTATCTACTG 4980
Db 4921 AAGTCCCAATTTGAAAGTGTGAGAAATCTGCCAGAGTCCAGCTGCTCTATCTACTG 4980
Qy 4981 ATACGTCGTGTATATGCAATGAGAAAGTGTGAGAGGAGAGAGCCAGAAATTTGAC 5040
Db 4981 ATACGTCGTGTATATGCAATGAGAAAGTGTGAGAGGAGAGAGCCAGAAATTTGAC 5040
Qy 5041 CTTCAACAGAAAGGTTCAACAAAGATGTCCATGCTGTGCTGCTGACCCAGAG 5100
Db 5041 CTTCAACAGAAAGGTTCAACAAAGATGTCCATGCTGTGCTGCTGACCCAGAG 5100
Qy 5101 AATTATGCTGTGTACAAAGTGTGCAAGAAACACACATACATCTTAACTAATTA 5160
Db 5101 AATTATGCTGTGTACAAAGTGTGCAAGAAACACACATACATCTTAACTAATTA 5160
Qy 5161 CTGAAGAGACTACTGATGTTATGAAGACAGATGCTGAGTTGTGTGTAACAGGAC 5220
Db 5161 CTGAAGAGACTACTGATGTTATGAAGACAGATGCTGAGTTGTGTGTAACAGGAC 5220
Qy 5221 TGAATATTTTCTAGAAATTTGCGGAGGAGAAATGGGTAGTACCTATTTCTGGGTGACC 5280
Db 5221 TGAATATTTTCTAGAAATTTGCGGAGGAGAAATGGGTAGTACCTATTTCTGGGTGACC 5280
Qy 5281 AGCTATTTAAAGAAAGAAATCTGATGAGCAGATTTTGAAGTCTAGAGAAATG 5340
Db 5281 AGCTATTTAAAGAAAGAAATCTGATGAGCAGATTTTGAAGTCTAGAGAAATG 5340
Qy 5341 TCAATGAAGAAACACCAAGGTTCCAAAGCGCAGAGAAATCCAGAGCAGAAAGATCT 5400
Db 5341 TCAATGAAGAAACACCAAGGTTCCAAAGCGCAGAGAAATCCAGAGCAGAAAGATCT 5400
Qy 5401 TCAGGGGCTAGAAATCTGTGTATGAGGCTTGTGATGAGGCTTGTGATGAGGCTT 5460
Db 5401 TCAGGGGCTAGAAATCTGTGTATGAGGCTTGTGATGAGGCTTGTGATGAGGCTT 5460
Qy 5461 AATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 5520
Db 5461 AATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 5520
Qy 5521 GCACAGGCTGCCACCAATTTGTTGTTGTCAGCCAGATGCTTGAGCAGAGAGCAATGCT 5580
Db 5521 GCACAGGCTGCCACCAATTTGTTGTTGTCAGCCAGATGCTTGAGCAGAGAGCAATGCT 5580
Qy 5581 TCCATGCAATTTGGCAGATGTTGTGAGGCACTGTGTGAGGCTTGTGAGGCTTGTG 5640
Db 5581 TCCATGCAATTTGGCAGATGTTGTGAGGCACTGTGTGAGGCTTGTGAGGCTTGTG 5640
Qy 5641 GGTGAGCACTACAGAGTCCAGAGGCTGAGGCACTACCTGATCCCAAGTCCCAACA 5700
Db 5641 GGTGAGCACTACAGAGTCCAGAGGCTGAGGCACTACCTGATCCCAAGTCCCAACA 5700
Qy 5701 GCCACTACTGA 5711
Db 5701 GCCACTACTGA 5711

RESULT 6
us-09-099-753-1
; Sequence 1, Application us/09099753
; Patent No. 6149903
; GENERAL INFORMATION:
; APPLICANT: HOLT, JEFFREY T.

APPLICANT: JENSEN, ROY A.
 APPLICANT: PAGE, DAVID L.
 APPLICANT: KING, MARY-CLAIRE
 APPLICANT: SZABO, CSILLA I.
 APPLICANT: JEFFON, THOMAS L.
 APPLICANT: ROBINSON-BENION, CHERYL L.
 APPLICANT: THOMPSON, MARILYN E.
 TITLE OF INVENTION: CHARACTERIZED BRCA1 AND BRCA2
 TITLE OF INVENTION: PROTEINS AND SCREENING AND THERAPEUTIC METHODS BASED ON
 TITLE OF INVENTION: CHARACTERIZED BRCA1 AND BRCA2 PROTEINS.
 NUMBER OF SEQUENCES: 29
 CORRESPONDENCE ADDRESSES:
 ADDRESSEE: ARLES A. TAYLOR, JR.
 STREET: SUITE 1401, UNIVERSITY TOWER, 3100 TOWER
 STREET: BOULEVARD
 CITY: DURHAM
 STATE: NORTH CAROLINA
 COUNTRY: USA
 ZIP: 27707
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Diskette, 3.50 inch, 800 KB storage
 COMPUTER: IBM PC/XT/AT compatible
 OPERATING SYSTEM: Windows 3.1
 SOFTWARE: WORD PERFECT 6.1 and ASCII
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/09/099,753
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: 08/603,753
 FILING DATE: 20 FEB 1996
 APPLICATION NUMBER: U.S. 08/373,799
 FILING DATE: 17 JAN 1995
 ATTORNEY/AGENT INFORMATION:
 NAME: ARLES A. TAYLOR, JR.
 REGISTRATION NUMBER: 39,395
 REFERENCE/DOCKET NUMBER: 1242/2
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: (919) 493-8000
 TELEFAX: (919) 419-0383
 TELEX:
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 5712
 TYPE: nucleic acid
 STRANDEDNESS: double
 TOPOLOGY: linear
 MOLECULE TYPE: cDNA to mRNA
 HYPOTHETICAL: no
 ANTI-SENSE: no
 ORIGINAL SOURCE:
 ORGANISM: Homo sapiens
 INDIVIDUAL ISOLATE:
 DEVELOPMENTAL STAGE: adult
 TISSUE TYPE: female breast
 CELL TYPE: ductal carcinoma in situ, invasive
 CELL TYPE: breast cancer and normal breast tissue
 CELL LINE: not derived from a cell line
 ORGANELLE: no
 IMMEDIATE SOURCE:
 LIBRARY: cDNA library derived from human
 CLONE: obtained using published sequence
 POSITION IN GENOME:
 CHROMOSOME/SEGMENT: unknown
 MAP POSITION: unknown
 UNITS: unknown
 FEATURE:
 NAME/KEY: BRCA1
 LOCATION: Genbank accession no. U14680
 IDENTIFICATION METHOD: microscopically directed
 IDENTIFICATION METHOD: sampling and nuclease protection assay
 OTHER INFORMATION: gene encoding BRCA1 protein
 PUBLICATION INFORMATION:

AUTHORS: Miki, Y., et. al.
 TITLE: A strong candidate gene for the breast and
 TITLE: ovarian cancer susceptibility gene BRCA1.
 JOURNAL: Science
 VOLUME: 266
 PAGES: 66-71
 DATE: 1994
 RELEVANT RESIDUES IN SEQ ID NO: 1:
 US-09-099-753-1
 Query Match 99.9%; Score 5707.8; DB 3; Length 5712;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;
 1 AGCTGGCTGAGACTCTCTGAGCCCGGACAGGCTGTGGGTTTGCACATATCTGGCC 60
 1 AGCTGGCTGAGACTCTCTGAGCCCGGACAGGCTGTGGGTTTGCACATATCTGGCC 60
 61 CCTGGCTCAGAGAGGCTTCCACCTCTGCTGGGTAAAGTTCATTTGAAAGAGAA 120
 61 CCTGGCTCAGAGAGGCTTCCACCTCTGCTGGGTAAAGTTCATTTGAAAGAGAA 120
 121 TGGATTATCTGCTCTTCCGCTTGAAGAAAGTCAATTAATGCTATGACAGAAA 180
 121 TGGATTATCTGCTCTTCCGCTTGAAGAAAGTCAATTAATGCTATGACAGAAA 180
 181 TCTTAGAGTGTCCCATCTGTGTGAGTTGATCAAGAACCTGTCCAAAGGTGACC 240
 181 TCTTAGAGTGTCCCATCTGTGTGAGTTGATCAAGAACCTGTCCAAAGGTGACC 240
 241 ACATATTTGCAAAATTTTGCATGCGAAACTCTCAACAGAGAAAGGCTTCACAGT 300
 241 ACATATTTGCAAAATTTTGCATGCGAAACTCTCAACAGAGAAAGGCTTCACAGT 300
 301 GTCTTATATGAAGATGATTAACCAAGAGCCTACAGAAAGTACAGATTTAGTC 360
 301 GTCTTATATGAAGATGATTAACCAAGAGCCTACAGAAAGTACAGATTTAGTC 360
 361 AACTGTGTAAGAGTATTTGAATATCTTTTGTGCTTTTACGTTGACAGAGTTGGAGT 420
 361 AACTGTGTAAGAGTATTTGAATATCTTTTGTGCTTTTACGTTGACAGAGTTGGAGT 420
 421 ATGCAACAGCTATATTTTGCAGAAAGAAATTAACCTCTGACATCTTAAAGATG 480
 421 ATGCAACAGCTATATTTTGCAGAAAGAAATTAACCTCTGACATCTTAAAGATG 480
 481 AAGTTCTATCATCAAGATGATGGCTACAGAAACCGTCCAAAGACTTCTACAGAGTG 540
 481 AAGTTCTATCATCAAGATGATGGCTACAGAAACCGTCCAAAGACTTCTACAGAGTG 540
 541 AACCCGAAATCCCTCTTCCAGAGAAACAGTCTCAGTCCCACTCTTAACCTTGGAA 600
 541 AACCCGAAATCCCTCTTCCAGAGAAACAGTCTCAGTCCCACTCTTAACCTTGGAA 600
 601 CTGTGAGAACTGTGAGAGCAAGAGCGGATCAACCTCAAAAGAGCTGTCTCATATG 660
 601 CTGTGAGAACTGTGAGAGCAAGAGCGGATCAACCTCAAAAGAGCTGTCTCATATG 660
 661 AATTGGAGTCTGATTTCTTCTGAAGATACCGTTAATTAAGCAACTTATTCAGTGGAG 720
 661 AATTGGAGTCTGATTTCTTCTGAAGATACCGTTAATTAAGCAACTTATTCAGTGGAG 720
 721 ATCAGAAATTTGTAACAAATCACCCCTCAAGAGAACCGAGATGTAATCAATTTGATTCG 780
 721 ATCAGAAATTTGTAACAAATCACCCCTCAAGAGAACCGAGATGTAATCAATTTGATTCG 780
 781 CAAAAAAGGCTCTTGTGAATTTTCTGAGAGGAGTAACTGTAACATTCATCAAC 840
 781 CAAAAAAGGCTCTTGTGAATTTTCTGAGAGGAGTAACTGTAACATTCATCAAC 840
 841 CCAGTAATTAATGATTTGAACACCACTGAGAGCGGTGACGTGAGAGGATCCAGAAAGT 900
 841 CCAGTAATTAATGATTTGAACACCACTGAGAGCGGTGACGTGAGAGGATCCAGAAAGT 900

QY	901	ATCAGGTAAGTCTCTGTTCCAACTTGCAATGAGACCAGATGGCCACAATACTCATGCCA	960
Db	901	ATCAGGTAAGTCTCTGTTCCAACTTGCAATGAGACCAGATGGCCACAATACTCATGCCA	960
QY	961	GCTCAATTCAGCATAGATAGAAACAGCATTTTATTCCTACATTAAGACGAATGAAATGTAGAA	1020
Db	961	GCTCAATTCAGCATAGATAGAAACAGCATTTTATTCCTACATTAAGACGAATGAAATGTAGAA	1020
QY	1021	AGGCTGAATTCGTATATAAAAGCAACAACAGCCGCGGTTAGCAAGAGCCACAATACAGAT	1080
Db	1021	AGGCTGAATTCGTATATAAAAGCAACAACAGCCGCGGTTAGCAAGAGCCACAATACAGAT	1080
QY	1081	GGGCTGGAAGTAAGCAAAACATGTATGATAGCGGACTCCAGCACAGAAAAAAGGTAG	1140
Db	1081	GGGCTGGAAGTAAGCAAAACATGTATGATAGCGGACTCCAGCACAGAAAAAAGGTAG	1140
QY	1141	ATCTGAATGCTGATCCCTGTGTGTGAGAAAAAAGAAATGGAATTAAGGAAACCTGCATCT	1200
Db	1141	ATCTGAATGCTGATCCCTGTGTGTGAGAAAAAAGAAATGGAATTAAGGAAACCTGCATCT	1200
QY	1201	CAGAGAAATCCTAGAGATACTGNAAGTGTTCCTTGATTAACAATAATAGCAGCATTCAGA	1260
Db	1201	CAGAGAAATCCTAGAGATACTGNAAGTGTTCCTTGATTAACAATAATAGCAGCATTCAGA	1260
QY	1261	AAGTTAATGAGTGTGTTTCAGAAAGTATGAACCTTTAGGTTCTGATACACATGATG	1320
Db	1261	AAGTTAATGAGTGTGTTTCAGAAAGTATGAACCTTTAGGTTCTGATACACATGATG	1320
QY	1321	GGGAGTCTGAATCAATGCAATGCAAGTAGTGATGATTTGAGAGCTTGTAAATGAGTAGATG	1380
Db	1321	GGGAGTCTGAATCAATGCAATGCAAGTAGTGATGATTTGAGAGCTTGTAAATGAGTAGATG	1380
QY	1381	AATATTCTGCTTCCTCAGAAAAATAGACTTACTGGCCAGTGATCCTCATGAGGCTTTAA	1440
Db	1381	AATATTCTGCTTCCTCAGAAAAATAGACTTACTGGCCAGTGATCCTCATGAGGCTTTAA	1440
QY	1441	TATGTAAAGATGAAGAGTGCACCTCCAAATCAAGTAGAGATTAATTGAAGCAAAATAT	1500
Db	1441	TATGTAAAGATGAAGAGTGCACCTCCAAATCAAGTAGAGATTAATTGAAGCAAAATAT	1500
QY	1501	TTGGGAAAAACCTATCGGAAGAAAGGAGAGCCCTCCCACTTAAAGCCATGTAACGAAATC	1560
Db	1501	TTGGGAAAAACCTATCGGAAGAAAGGAGAGCCCTCCCACTTAAAGCCATGTAACGAAATC	1560
QY	1561	TAAATTATGAGAGCATTTGTTACTAGGCCACAGATTAATCAAGAGCGTCCCTCACAAATA	1620
Db	1561	TAAATTATGAGAGCATTTGTTACTAGGCCACAGATTAATCAAGAGCGTCCCTCACAAATA	1620
QY	1621	AATTAAACCGTAAAGAGAGACCTCAATCAGGCTTCATCCGAGGATTTTATCAAGAAG	1680
Db	1621	AATTAAACCGTAAAGAGAGACCTCAATCAGGCTTCATCCGAGGATTTTATCAAGAAG	1680
QY	1681	CAGATTTTGGCAGTTCAAAAAGACTCCTGAAATGATAAATCAGGGAACTTAACCAAGGAGC	1740
Db	1681	CAGATTTTGGCAGTTCAAAAAGACTCCTGAAATGATAAATCAGGGAACTTAACCAAGGAGC	1740
QY	1741	AGAATGGTCAAGTGTATGATATTAATTAAGTGTCATGAGAAATTAACCAAGAGGTGATT	1800
Db	1741	AGAATGGTCAAGTGTATGATATTAATTAAGTGTCATGAGAAATTAACCAAGAGGTGATT	1800
QY	1801	CTATTCAAAATGAGAAAAATCCTCAACCAATAGATCACTCGAAAAAANAATCTGCTTCA	1860
Db	1801	CTATTCAAAATGAGAAAAATCCTCAACCAATAGATCACTCGAAAAAANAATCTGCTTCA	1860
QY	1861	AAAGCAAAAGCTGAACCTTAATAGCAGCAGATTAAGCAATATGAACTCGAATTAATATCC	1920
Db	1861	AAAGCAAAAGCTGAACCTTAATAGCAGCAGATTAAGCAATATGAACTCGAATTAATATCC	1920
QY	1921	ACAATTCAAAAGCAACCTTAATAAAGATTAAGCTGAGAGAGAAAGTCTTTCAACGAGCATATTC	1980
Db	1921	ACAATTCAAAAGCAACCTTAATAAAGATTAAGCTGAGAGAGAAAGTCTTTCAACGAGCATATTC	1980

QY	1981	ATGCCCTTGAACCTAGTACGTACAGTAAATCTTAAGCCCACTAATGTACTGAATTGCAA	2040
Db	1981	ATGCCCTTGAACCTAGTACGTACAGTAAATCTTAAGCCCACTAATGTACTGAATTGCAA	2040
QY	2041	TTGATAGTGTCTCTAGCAGTGAAGAGATAAAGAAAAAAAGTACAACTAACGTCAGTCA	2100
Db	2041	TTGATAGTGTCTCTAGCAGTGAAGAGATAAAGAAAAAAAGTACAACTAACGTCAGTCA	2100
QY	2101	GGCAGACGAAACCTACACTCATGAGAGTTAAAGACTTGCACCTGGAGCCAGAAGA	2160
Db	2101	GGCAGACGAGAAACCTACAACTCATGAGAGTTAAAGAACTGCAACTGGAGCCAGAAGA	2160
QY	2161	GTAAACAAGCCAAATGACAGACAACTAAAGAACATGACAGTATCTTCCAGAGCTGA	2220
Db	2161	GTAAACAAGCCAAATGACAGACAACTAAAGAACATGACAGTATCTTCCAGAGCTGA	2220
QY	2221	AGTTAAACAAATGCACCTGGTTCCTTTTACTAAAGTGTTCAAATACGAGTAACTTAAGAT	2280
Db	2221	AGTTAAACAAATGCACCTGGTTCCTTTTACTAAAGTGTTCAAATACGAGTAACTTAAGAT	2280
QY	2281	TTGTCAATCTAGCCTTCCAGAGAGAAAAAGAGAAATCTAGAACTTAAGT	2340
Db	2281	TTGTCAATCTAGCCTTCCAGAGAGAAAAAGAGAAATCTAGAACTTAAGT	2340
QY	2341	CTAAATAATGCTGAACACCCCAAAGATCTCATGTTAAAGTGAGAAAGGCTTTTGCAACTG	2400
Db	2341	CTAAATAATGCTGAACACCCCAAAGATCTCATGTTAAAGTGAGAAAGGCTTTTGCAACTG	2400
QY	2401	AAAGATCTGTAGAGAGTAGACAGTATTTATTTAGTACTGTAGTACTGATTATGGCACTAGG	2460
Db	2401	AAAGATCTGTAGAGAGTAGACAGTATTTATTTAGTACTGTAGTACTGATTATGGCACTAGG	2460
QY	2461	AAAGATCTCGTTACTGGAAGTTAGCACTAGGAGGAAGGCAAAAAACAGAACCAATTAAT	2520
Db	2461	AAAGATCTCGTTACTGGAAGTTAGCACTAGGAGGAAGGCAAAAAACAGAACCAATTAAT	2520
QY	2521	GTGTGAGTCAGTGTGCAGCAATTGAAAACCCAGGGACTAATTCATGTGTTGCCAAG	2580
Db	2521	GTGTGAGTCAGTGTGCAGCAATTGAAAACCCAGGGACTAATTCATGTGTTGCCAAG	2580
QY	2581	ATAATAAGAAATGACACAGAGGCTTTAAGTATCCATTGGGACATGAATTTAAACCAAGTC	2640
Db	2581	ATAATAAGAAATGACACAGAGGCTTTAAGTATCCATTGGGACATGAATTTAAACCAAGTC	2640
QY	2641	GGGAACAAGCATAGAAATGGAAGAAGTGAATCTTATCTAGTATTTGCAGATACAT	2700
Db	2641	GGGAACAAGCATAGAAATGGAAGAAGTGAATCTTATCTAGTATTTGCAGATACAT	2700
QY	2701	TCAAGGTTCAAAGGCCAGTCAATTTGCTGTGTTTCAAATCCAGGAAATCCAGAAAGG	2760
Db	2701	TCAAGGTTCAAAGGCCAGTCAATTTGCTGTGTTTCAAATCCAGGAAATCCAGAAAGG	2760
QY	2761	AATGTGCAACATCTCTGCCACACTCTGGGCTCTTAAGAAACCAAAAGTCCAAAAGTCACTT	2820
Db	2761	AATGTGCAACATCTCTGCCACACTCTGGGCTCTTAAGAAACCAAAAGTCCAAAAGTCACTT	2820
QY	2821	TTGAATGTGAACAAAGAGAAAGAAATCAAGAAAGATGAGTCTAATATCAAGCTTAC	2880
Db	2821	TTGAATGTGAACAAAGAGAAAGAAATCAAGAAAGATGAGTCTAATATCAAGCTTAC	2880
QY	2881	AGACAGTTAATATCACTGACAGGCTTCTGTGTGTGGTGCACAAGAGTAAAGCACTTGATA	2940
Db	2881	AGACAGTTAATATCACTGACAGGCTTCTGTGTGTGGTGCACAAGAGTAAAGCACTTGATA	2940
QY	2941	ATGCCAAATGTAGTCAAGAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA	3000
Db	2941	ATGCCAAATGTAGTCAAGAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA	3000
QY	3001	ACGAATCGAGACTAATCTCAAAATAAACAATGACCTTTTACAACACCCATATCTATAC	3060
Db	3001	ACGAATCGAGACTAATCTCAAAATAAACAATGACCTTTTACAACACCCATATCTATAC	3060
QY	3061	CACCACTTTTCCATCAAGTCAATTTGTTAAATGTAATGTAAGAAAAAATCTGTAGAGG	3120

|||||
Db 3061 CACACATTTCCATCAGATCTTTGTTAAACTTAATGTAAGAAAAATCTGCTAGAGG 3120
QY 3121 AAAAATTGGAGAACATTCATATGTCACCTGAAAGAAATGGAAATGAGAACATTCCAA 3180
Db 3121 AAAAATTGGAGAACATTCATATGTCACCTGAAAGAAATGGAAATGAGAACATTCCAA 3180
QY 3181 GTACAGTGAAGACAAATTAAGCCGTATATACATTTAGAGAAAAATGTTTTAAAGACCAAGCT 3240
Db 3181 GTACAGTGAAGACAAATTAAGCCGTATATACATTTAGAGAAAAATGTTTTAAAGACCAAGCT 3240
QY 3241 CAAGCAATATTTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAAA 3300
Db 3241 CAAGCAATATTTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAAA 3300
QY 3301 TAGGTTCCAGTGAAGAAACATTCAGACAGAACTAGTAGAAGAACAGAGGGCCAAATTTGA 3360
Db 3301 TAGGTTCCAGTGAAGAAACATTCAGACAGAACTAGTAGAAGAACAGAGGGCCAAATTTGA 3360
QY 3361 ATGCTATGCTTAGATTAAGGGGTTTGGCAACTGAGGCTATTAACAAGTCTTCTGGAA 3420
Db 3361 ATGCTATGCTTAGATTAAGGGGTTTGGCAACTGAGGCTATTAACAAGTCTTCTGGAA 3420
QY 3421 GTAATTGTAAAGCATCTGAAATTAAGAAAGCAAGAAATGAAGAAAGTAGTTCAGACTGTTA 3480
Db 3421 GTAATTGTAAAGCATCTGAAATTAAGAAAGCAAGAAATGAAGAAAGTAGTTCAGACTGTTA 3480
QY 3481 ATACAGATTTCTCTCCATCTATCTGATTTAGATTAAGAACACCTATGGAGTAGTCTC 3540
Db 3481 ATACAGATTTCTCTCCATCTATCTGATTTAGATTAAGAACACCTATGGAGTAGTCTC 3540
QY 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGATGATGATGATGATG 3600
Db 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGATGATGATGATGATG 3600
QY 3601 AAGTACTAGTTTGTGTAAGAAATGACATTAAGAAAGTCTGCTGTTTTAGCAAAAGCG 3660
Db 3601 AAGTACTAGTTTGTGTAAGAAATGACATTAAGAAAGTCTGCTGTTTTAGCAAAAGCG 3660
QY 3661 TCCGAAAGGAGACCTTAGACGAGGCTCCAGCCCTTACCCATACACATTTGGCTCAGG 3720
Db 3661 TCCGAAAGGAGACCTTAGACGAGGCTCCAGCCCTTACCCATACACATTTGGCTCAGG 3720
QY 3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTAGTAGAGATG 3780
Db 3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTAGTAGAGATG 3780
QY 3781 AAGAGCTTCCCTGCTCCAACTGTTATTTGGTAAAGTAAACATATACCTTCTCAGT 3840
Db 3781 AAGAGCTTCCCTGCTCCAACTGTTATTTGGTAAAGTAAACATATACCTTCTCAGT 3840
QY 3841 CTATAGGCAATAGACCGGCTGCTACGAGTCTGCTGTAAGAAACAGAGAGAAATTTAT 3900
Db 3841 CTATAGGCAATAGACCGGCTGCTACGAGTCTGCTGTAAGAAACAGAGAGAAATTTAT 3900
QY 3901 TATCATTGAAGAAATAGCTTAATGACTGACGTAAACAGAGTATTTGGCAAGAGCATCTC 3960
Db 3901 TATCATTGAAGAAATAGCTTAATGACTGACGTAAACAGAGTATTTGGCAAGAGCATCTC 3960
QY 3961 AGGAACATCACCTTAGAGAGAAACAAATGTTCTGCTAGCTGTTTTCTTCAACAGTGA 4020
Db 3961 AGGAACATCACCTTAGAGAGAAACAAATGTTCTGCTAGCTGTTTTCTTCAACAGTGA 4020
QY 4021 GTGAATTGGAAGAACTTAGCTGCAATTAACAAACACCCAGAGATCTTTCTGATTTGGTCTT 4080
Db 4021 GTGAATTGGAAGAACTTAGCTGCAATTAACAAACACCCAGAGATCTTTCTGATTTGGTCTT 4080
QY 4081 CCAAAACAAATGAGGACATCTGTAAGAGCCAGGAGTGTGCTGAGTGAACAGAAATTTGG 4140
Db 4081 CCAAAACAAATGAGGACATCTGTAAGAGCCAGGAGTGTGCTGAGTGAACAGAAATTTGG 4140
QY 4141 TTTCAGATGATGAAGAAAGAGAAAGGAGGCTTGAAGAAATATCAAGAGAGCAAAAGCA 4200
Db 4141 TTTCAGATGATGAAGAAAGAGAAAGGAGGCTTGAAGAAATATCAAGAGAGCAAAAGCA 4200

|||||
Db 4141 TTTCAGATGATGAAGAAAGAGAAAGGAGGCTTGAAGAAATATCAAGAGAGCAAAAGCA 4200
QY 4201 TGGATTTCAAACCTTAGGTAAGACACATCTGGGTTGAGAGTGAAGAAACAGGCTCTCTGAG 4260
Db 4201 TGGATTTCAAACCTTAGGTAAGACACATCTGGGTTGAGAGTGAAGAAACAGGCTCTCTGAG 4260
QY 4261 ACTGTCAGGCTATCTCTCAGAGTGAATTTTAACACATCAGACAGAGGATACCATATC 4320
Db 4261 ACTGTCAGGCTATCTCTCAGAGTGAATTTTAACACATCAGACAGAGGATACCATATC 4320
QY 4321 AACATACCTGATTAAGCTCCAGAGAAATGCGTGAACCTAGAGCTGTTAGAACAGC 4380
Db 4321 AACATACCTGATTAAGCTCCAGAGAAATGCGTGAACCTAGAGCTGTTAGAACAGC 4380
QY 4381 ATGGAGAGCAGCCTTTCTACAGCTACCTTCCATCATTAAGTACATCTCTCTCCCTTGAAG 4440
Db 4381 ATGGAGAGCAGCCTTTCTACAGCTACCTTCCATCATTAAGTACATCTCTCTCCCTTGAAG 4440
QY 4441 ACCTGCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTATTAACCTTCAAGAAAAAGTA 4500
Db 4441 ACCTGCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTATTAACCTTCAAGAAAAAGTA 4500
QY 4501 GTGAATTAACCTTAATAGCCAGAAATCCAGAGGCTTTTCTGCTGACAGATTTGAGTGTCTG 4560
Db 4501 GTGAATTAACCTTAATAGCCAGAAATCCAGAGGCTTTTCTGCTGACAGATTTGAGTGTCTG 4560
QY 4561 CAGATAGTCTACAGATTAAGAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAAT 4620
Db 4561 CAGATAGTCTACAGATTAAGAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAAT 4620
QY 4621 GCCCATCATTAATGATAGTGTGTATGACAGATGCTGCTGGAGTCTTACAGAAATGAA 4680
Db 4621 GCCCATCATTAATGATAGTGTGTATGACAGATGCTGCTGGAGTCTTACAGAAATGAA 4680
QY 4681 ACTACCATCTCAAGAGAGAGCTCAATTAAGTGTGTATGATGAGAGACACAGCTGGAAG 4740
Db 4681 ACTACCATCTCAAGAGAGAGCTCAATTAAGTGTGTATGATGAGAGACACAGCTGGAAG 4740
QY 4741 AGCTGGGCGACAGATTTGACGAAACATCTCTGCTGCAAGGCAAGATTAAGAGGAA 4800
Db 4741 AGCTGGGCGACAGATTTGACGAAACATCTCTGCTGCAAGGCAAGATTAAGAGGAA 4800
QY 4801 CCCCTTACCTGGAATCTGGAATCAGCTCTCTCTGATGACCTGGAATCTGATCTCTG 4860
Db 4801 CCCCTTACCTGGAATCTGGAATCAGCTCTCTCTGATGACCTGGAATCTGATCTCTG 4860
QY 4861 AAGACAGAGCCCGAGAGTCAAGCTGCTGTTGGCAACATACCATCTTCAACCTCTCATTTGA 4920
Db 4861 AAGACAGAGCCCGAGAGTCAAGCTGCTGTTGGCAACATACCATCTTCAACCTCTCATTTGA 4920
QY 4921 AAGTTCCCAATTAAGGTTGCAAAATCTGCCCAGAGTCCAGCTGCTGCTCATACTCTG 4980
Db 4921 AAGTTCCCAATTAAGGTTGCAAAATCTGCCCAGAGTCCAGCTGCTGCTCATACTCTG 4980
QY 4981 ATACTGCTGGTATTAATGCAATGGAAGAAAGTGTGACAGAGGAGAAAGCAAAATTTGACAG 5040
Db 4981 ATACTGCTGGTATTAATGCAATGGAAGAAAGTGTGACAGAGGAGAAAGCAAAATTTGACAG 5040
QY 5041 CTTCACAGAGAAAGGCTCAACAAAGAAATGTCACAGTGTGTGCTGACCCCAAGAG 5100
Db 5041 CTTCACAGAGAAAGGCTCAACAAAGAAATGTCACAGTGTGTGCTGACCCCAAGAG 5100
QY 5101 AATTTATGCTGCTGTACAGTTGCGCAAGAAACCAATACCTTAATTAATTAATTA 5160
Db 5101 AATTTATGCTGCTGTGTACAGTTGCGCAAGAAACCAATACCTTAATTAATTAATTA 5160
QY 5161 CTGAGAGACATCTACATGTTGTTATGAAGAAACAGATGCTGATTTGTGTGTAAGAGCAC 5220
Db 5161 CTGAGAGACATCTACATGTTGTTATGAAGAAACAGATGCTGATTTGTGTGTAAGAGCAC 5220
QY 5221 TGAATATATTTCTTAGAATTTGCGGAGAGAAATGGTAGTTAGCTATTTCTGGGTGACCC 5280
Db 5221 TGAATATATTTCTTAGAATTTGCGGAGAGAAATGGTAGTTAGCTATTTCTGGGTGACCC 5280

QY 721 ATCAGAAATTTGTTACAAATACCCCTCAGAAACAGAGGATGAATCAGTTGGATTCTG 780
|||||
Db 721 ATCAGAAATTTGTTACAAATACCCCTCAGAAACAGAGGATGAATCAGTTGGATTCTG 780
QY 781 CAAAAAGGCTGCTTGTGAATTTTCTGAGACGGATGTAACTACTGAACATCATCAAC 840
|||||
Db 781 CAAAAAGGCTGCTTGTGAATTTTCTGAGACGGATGTAACTACTGAACATCATCAAC 840
QY 841 CCAATATATATGATTTGAACACACGAGAGGCTGAGCTGAGAGGATCCAGAAAGT 900
|||||
Db 841 CCAATATATGATTTGAACACACGAGAGGCTGAGCTGAGAGGATCCAGAAAGT 900
QY 901 ATCAGAGGTAGTTCTGTTTCAAACTGTCATGTGAGCCATGTGGACAAATACTCATGCA 960
|||||
Db 901 ATCAGAGGTAGTTCTGTTTCAAACTGTCATGTGAGCCATGTGGACAAATACTCATGCA 960
QY 961 GCTCATTTACGCAATGAGAACAGAGTTTACTCACTAAAGACAGAAATGATAGAAA 1020
|||||
Db 961 GCTCATTTACGCAATGAGAACAGAGTTTACTCACTAAAGACAGAAATGATAGAAA 1020
QY 1021 AGGCTGAATTCCTGTAATAAAGCAACAGCCTGGCTTGAAGAGGCAACATTAACGAT 1080
|||||
Db 1021 AGGCTGAATTCCTGTAATAAAGCAACAGCCTGGCTTGAAGAGGCAACATTAACGAT 1080
QY 1081 GGGCTGGAATGAAGAAACATGTATATGATAGCGGACTCCAGACAGAAAAAGGTAG 1140
|||||
Db 1081 GGGCTGGAATGAAGAAACATGTATATGATAGCGGACTCCAGACAGAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAAAGAAAGTGAATTAAGCAGAAACTGCCATGCT 1200
|||||
Db 1141 ATCTGAATGCTGATCCCTGTGTGAGAAAGAAAGTGAATTAAGCAGAAACTGCCATGCT 1200
QY 1201 CAGAGATCTCTAGAAATCTGAGAGATGTCCTTGGATTAACATTAAGAGCATTGAGA 1260
|||||
Db 1201 CAGAGATCTCTAGAAATCTGAGAGATGTCCTTGGATTAACATTAAGAGCATTGAGA 1260
QY 1261 AAGTTATGATGAGTTTCCAGAAAGTATGATGATGATGATGATGATGATGATGATG 1320
|||||
Db 1261 AAGTTATGATGAGTTTCCAGAAAGTATGATGATGATGATGATGATGATGATGATG 1320
QY 1321 GGGAGTCGATCAATGCCAAAGTATGATGATGATGATGATGATGATGATGATGATG 1380
|||||
Db 1321 GGGAGTCGATCAATGCCAAAGTATGATGATGATGATGATGATGATGATGATGATG 1380
QY 1381 AATATTCGTGCTCTGAGAGAAATGACTTACTGGCAGTATGCCATGAGGCTTTAA 1440
|||||
Db 1381 AATATTCGTGCTCTGAGAGAAATGACTTACTGGCAGTATGCCATGAGGCTTTAA 1440
QY 1441 TATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATTAATTTGAAGACAAATAT 1500
|||||
Db 1441 TATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATTAATTTGAAGACAAATAT 1500
QY 1501 TTGGGAAACCTATCGGAAAGAGCAAGCTCCCAACTTAAGCATGTAACTGAAATTC 1560
|||||
Db 1501 TTGGGAAACCTATCGGAAAGAGCAAGCTCCCAACTTAAGCATGTAACTGAAATTC 1560
QY 1561 TAATTTAGGAGCATTTGTTACTGAGGCAAGATTAATTAAGAGGCGCCCTCAAAATA 1620
|||||
Db 1561 TAATTTAGGAGCATTTGTTACTGAGGCAAGATTAATTAAGAGGCGCCCTCAAAATA 1620
QY 1621 AATTTAAAGCTAAAGAGAGCATCAATCAGGCTTCTCATCTGAGAGATTTATCAAGAA 1680
|||||
Db 1621 AATTTAAAGCTAAAGAGAGCATCAATCAGGCTTCTCATCTGAGAGATTTATCAAGAA 1680
QY 1681 CAAATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAACTAACCAAGCGAGC 1740
|||||
Db 1681 CAAATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAACTAACCAAGCGAGC 1740
QY 1741 AGAATGGTCAAGGATGAATTAATTAATGATGATGATGATGATGATGATGATGATG 1800
|||||
Db 1741 AGAATGGTCAAGGATGAATTAATTAATGATGATGATGATGATGATGATGATGATG 1800
QY 1801 CTATTCGATGAGAAAAATCTTAACCAATCAGTAATCAAGAAAAAGAAATCTGCTTCA 1860
|||||

|||||
Db 1801 CTATTCGATGAGAAAAATCTTAACCAATCAGTAATCAGTAATCAAGAAAAAGAAATCTGCTTCA 1860
QY 1861 AAACGAAAGCTGAACCTATTAAGCAGAGTATTAACCAATTAAGCAATTAATTAATTC 1920
|||||
Db 1861 AAACGAAAGCTGAACCTATTAAGCAGAGTATTAACCAATTAAGCAATTAATTAATTC 1920
QY 1921 ACAATTCAAAAGCACTTAAGAAAGATGAGGCTGAGAGAGAGTCTTCAACGAGCATATTC 1980
|||||
Db 1921 ACAATTCAAAAGCACTTAAGAAAGATGAGGCTGAGAGAGAGTCTTCAACGAGCATATTC 1980
QY 1981 ATGGCTTGAACCTAGTATGATGATGATGATGATGATGATGATGATGATGATGATG 2040
|||||
Db 1981 ATGGCTTGAACCTAGTATGATGATGATGATGATGATGATGATGATGATGATGATG 2040
QY 2041 TTGATATGTTCTTCTAGCAGTGAAGATTAAGAAAAAAAGTACACCAATGCACTCA 2100
|||||
Db 2041 TTGATATGTTCTTCTAGCAGTGAAGATTAAGAAAAAAAGTACACCAATGCACTCA 2100
QY 2101 GGCACAGCAGAAACCTCAACTCATGTAAGGTTAAAGAACTGCAACTGAGCCAAAGA 2160
|||||
Db 2101 GGCACAGCAGAAACCTCAACTCATGTAAGGTTAAAGAACTGCAACTGAGCCAAAGA 2160
QY 2161 GTAACAAAGCCAAATGAACAGACAGTAAAGACATGACAGTATCTTCCAGAGCTGA 2220
|||||
Db 2161 GTAACAAAGCCAAATGAACAGACAGTAAAGACATGACAGTATCTTCCAGAGCTGA 2220
QY 2221 AGTTAACAAATGCACTGCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT 2280
|||||
Db 2221 AGTTAACAAATGCACTGCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCTTCT 2280
QY 2281 TTGCAATCCTAGCTTCCAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGT 2340
|||||
Db 2281 TTGCAATCCTAGCTTCCAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGAAAGT 2340
QY 2341 CTAAATATGCTGAAGAACCCCAAGATCTCAATGTTAACTGAGAAAGGTTTGCACATG 2400
|||||
Db 2341 CTAAATATGCTGAAGAACCCCAAGATCTCAATGTTAACTGAGAAAGGTTTGCACATG 2400
QY 2401 AAAGATCTGAGAGATGAGCAATTTCAATTTGATGATGATGATGATGATGATGATG 2460
|||||
Db 2401 AAAGATCTGAGAGATGAGCAATTTCAATTTGATGATGATGATGATGATGATGATG 2460
QY 2461 AAAGATCTGATCTGAGAGATGAGCAATTTGATGATGATGATGATGATGATGATG 2520
|||||
Db 2461 AAAGATCTGATCTGAGAGATGAGCAATTTGATGATGATGATGATGATGATGATG 2520
QY 2521 GTGAGTCACTGTCAGCATTTGAAACCCCAAGGACTAATTCATGATGTTCCAAAG 2580
|||||
Db 2521 GTGAGTCACTGTCAGCATTTGAAACCCCAAGGACTAATTCATGATGATGTTCCAAAG 2580
QY 2581 ATATATGAATGACACAGAAAGGCTTTAAGTATGATGATGATGATGATGATGATG 2640
|||||
Db 2581 ATATATGAATGACACAGAAAGGCTTTAAGTATGATGATGATGATGATGATGATG 2640
QY 2641 GGGAAACAGCATAGAAATGAGAAAGTGAATGATGATGATGATGATGATGATGATG 2700
|||||
Db 2641 GGGAAACAGCATAGAAATGAGAAAGTGAATGATGATGATGATGATGATGATGATG 2700
QY 2701 TCAAGGTTTCAAGCGGCACTTCAATTTGCTTGTTCCTTCAATTCAGGAAATGCAAGAGG 2760
|||||
Db 2701 TCAAGGTTTCAAGCGGCACTTCAATTTGCTTGTTCCTTCAATTCAGGAAATGCAAGAGG 2760
QY 2761 AATGTCACATTTCTCTGCCACTCTGCGCTTTAAAGAAACAAAGTCCAAAGTCACTT 2820
|||||
Db 2761 AATGTCACATTTCTCTGCCACTCTGCGCTTTAAAGAAACAAAGTCCAAAGTCACTT 2820
QY 2821 TTGAATGTGAACAAAGAGAAATTAAGGAAAGATGATGATGATGATGATGATGATG 2880
|||||
Db 2821 TTGAATGTGAACAAAGAGAAATTAAGGAAAGATGATGATGATGATGATGATGATG 2880
QY 2881 AGACAGTTAATATCACTGACAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 2940
|||||

Db 2881 AGACAGTAAATATCATGCGAGGCTTCCTGTTGGTTCAGAAAAGATAGCCAGTTGATA 2940
QY 2941 ATGCCAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA 3000
Db 2941 ATGCCAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGCA 3000
QY 3001 ACGAACTGACATCTACTCCAAATTAACATGAGCATTTTACAAAACCATATGCTATAC 3060
Db 3001 ACGAACTGACATCTACTCCAAATTAACATGAGCATTTTACAAAACCATATGCTATAC 3060
QY 3061 CACACATTTTCCATCAAGCATTTTGTAAACTAAATGTAAAGAAAATGCTAGAGG 3120
Db 3061 CACACATTTTCCATCAAGCATTTTGTAAACTAAATGTAAAGAAAATGCTAGAGG 3120
QY 3121 AAAACTTTGAGGAATTCATCATGTCACCTGAAAGAAATGGAATGAGAAATTCCTCAA 3180
Db 3121 AAAACTTTGAGGAATTCATCATGTCACCTGAAAGAAATGGAATGAGAAATTCCTCAA 3180
QY 3181 GTACAGTGAACAAATTAAGCCGTAAATTAACATTAAGAAAATGTTTTTAAAGAGCAGCT 3240
Db 3181 GTACAGTGAACAAATTAAGCCGTAAATTAACATTAAGAAAATGTTTTTAAAGAGCAGCT 3240
QY 3241 CAAGCAATATTAATGAAGTGGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGAAA 3300
Db 3241 CAAGCAATATTAATGAAGTGGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGAAA 3300
QY 3301 TAGGTCCTAGTGAATCAATTCAGCAGAACTAGGTAGAAGAGAGGCCAAATTTGA 3360
Db 3301 TAGGTCCTAGTGAATCAATTCAGCAGAACTAGGTAGAAGAGAGGCCAAATTTGA 3360
QY 3361 ATGCTATGCTTAGATTTGGGGTTTGAACCTGAGGCTATAAACAAGCTTCTCGGAA 3420
Db 3361 ATGCTATGCTTAGATTTGGGGTTTGAACCTGAGGCTATAAACAAGCTTCTCGGAA 3420
QY 3421 GTAATTTGAAGCATCTGAAATATAAAAGCAAGATATGAAGATAGTCTAGACTGTTA 3480
Db 3421 GTAATTTGAAGCATCTGAAATATAAAAGCAAGATATGAAGATAGTCTAGACTGTTA 3480
QY 3481 ATACAGATTTCTCTCATATCTGATTTTCAGATTAAGAAAGAGCTTATGGAGATGTC 3540
Db 3481 ATACAGATTTCTCTCATATCTGATTTTCAGATTAAGAAAGAGCTTATGGAGATGTC 3540
QY 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGCTGAATTAAGG 3600
Db 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTAGATGATGCTGAATTAAGG 3600
QY 3601 AAGATACATTTTGTCTGAAATATGACATTAAGAAAAGTTCGTGTTTTAGCAAAAAGC 3660
Db 3601 AAGATACATTTTGTCTGAAATATGACATTAAGAAAAGTTCGTGTTTTAGCAAAAAGC 3660
QY 3661 TCCAGAAAGAGAGCTTACAGAGAGTCTAGCCCTTACCCATACACATTTGGCTCAGG 3720
Db 3661 TCCAGAAAGAGAGCTTACAGAGAGTCTAGCCCTTACCCATACACATTTGGCTCAGG 3720
QY 3721 GTTACGGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGAGAGTG 3780
Db 3721 GTTACGGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGAGAGTG 3780
QY 3781 AAGAGCTTCCCTGCTCCAAACACTTTTATTTGGTAAAGTAAACATATACCTCTCAGT 3840
Db 3781 AAGAGCTTCCCTGCTCCAAACACTTTTATTTGGTAAAGTAAACATATACCTCTCAGT 3840
QY 3841 CTACTAGGAGTACGACCGTTGCTACGAGTCTGCTCAAGAACACAGAGAGAAATTTAT 3900
Db 3841 CTACTAGGAGTACGACCGTTGCTACGAGTCTGCTCAAGAACACAGAGAGAAATTTAT 3900
QY 3901 TATCATTTGAAGATAGCTTAAATGACTGCACTAACAGGTAAATTTGGCAAAAGCATCTC 3960
Db 3901 TATCATTTGAAGATAGCTTAAATGACTGCACTAACAGGTAAATTTGGCAAAAGCATCTC 3960
QY 3961 AGGAACATCACTTAGTGAAGAAACAATAATGTTCTGCTAGCTTTTCTTCCACAGTGCA 4020
Db 3961 AGGAACATCACTTAGTGAAGAAACAATAATGTTCTGCTAGCTTTTCTTCCACAGTGCA 4020

QY 4021 GTGAATTTGGAAGACTTGACTGCAAAATACAAAACACCAGAGATCCCTTCTGATTTGTTCTT 4080
Db 4021 GTGAATTTGGAAGACTTGACTGCAAAATACAAAACACCAGAGATCCCTTCTGATTTGTTCTT 4080
QY 4081 CCAAAACAATAGGATCAGTCTGTAAGAACCCAGAGAGTTGGTCTGAGTGAACAAGAAATGG 4140
Db 4081 CCAAAACAATAGGATCAGTCTGTAAGAACCCAGAGAGTTGGTCTGAGTGAACAAGAAATGG 4140
QY 4141 TTTCAATGATGAAGAAAGAGAGGAGGCTTGAAGAAATTAATCAAGAAAGACAAAGCA 4200
Db 4141 TTTCAATGATGAAGAAAGAGAGGAGGCTTGAAGAAATTAATCAAGAAAGACAAAGCA 4200
QY 4201 TGAATTTCAACTTAGGTGAACACAGATCTGGGTGTGAGAGTGAACAAGGCTCTGAAG 4260
Db 4201 TGAATTTCAACTTAGGTGAACACAGATCTGGGTGTGAGAGTGAACAAGGCTCTGAAG 4260
QY 4261 ACTGCTCAGGCTATCCCTCTAGAGTGAATTTTAACCATCTCAGACAGAGGATACCATGC 4320
Db 4261 ACTGCTCAGGCTATCCCTCTAGAGTGAATTTTAACCATCTCAGACAGAGGATACCATGC 4320
QY 4321 AACATTAACCTGATTAAGCTCCAGAGAAATGGCTGAATTAAGAGTGTGTAGAACAGC 4380
Db 4321 AACATTAACCTGATTAAGCTCCAGAGAAATGGCTGAATTAAGAGTGTGTAGAACAGC 4380
QY 4381 ATGGAGCCAGCCTTTCTTAACAGCTACCTTCATCATTAAGTACTTCTTCCCTTGAGG 4440
Db 4381 ATGGAGCCAGCCTTTCTTAACAGCTACCTTCATCATTAAGTACTTCTTCCCTTGAGG 4440
QY 4441 ACTGCGAAATTCGAACAAAGACATCAGAAAAGAGATTAATTAATTCACAGAAAAGTA 4500
Db 4441 ACTGCGAAATTCGAACAAAGACATCAGAAAAGAGATTAATTAATTCACAGAAAAGTA 4500
QY 4501 GTGAATACCTTAATAGCCAGATCCAGAAAGGCTTTCTGCTGACAAAGTTTGAAGTGTG 4560
Db 4501 GTGAATACCTTAATAGCCAGATCCAGAAAGGCTTTCTGCTGACAAAGTTTGAAGTGTG 4560
QY 4561 CAGATAGTTCTTAACAGTAAATTAAGAACCCAGAGAGTGAAGTCAATCCCTTCTTAAT 4620
Db 4561 CAGATAGTTCTTAACAGTAAATTAAGAACCCAGAGAGTGAAGTCAATCCCTTCTTAAT 4620
QY 4621 GCCCATCAATTGATGATAGGTGTGATGACAGCAATTTGCTGGAGGCTTCAAAATGAA 4680
Db 4621 GCCCATCAATTGATGATAGGTGTGATGACAGCAATTTGCTGGAGGCTTCAAAATGAA 4680
QY 4681 ACTACCCATCTCAAGAGAGGCTCAATTAAGTGTGTGATGTGAGAGCAACACCTGGAAG 4740
Db 4681 ACTACCCATCTCAAGAGAGGCTCAATTAAGTGTGTGATGTGAGAGCAACACCTGGAAG 4740
QY 4741 AGTCTGGGCCACAGAGATTTGACGAAACATCTTACTTGGCCAAAGCAAGATCTGAGAGGAA 4800
Db 4741 AGTCTGGGCCACAGAGATTTGACGAAACATCTTACTTGGCCAAAGCAAGATCTGAGAGGAA 4800
QY 4801 CCCCTTACCTGGAATCTGGAATCAGCTCTCTGATGACCCGTAATCTGATCTCTG 4860
Db 4801 CCCCTTACCTGGAATCTGGAATCAGCTCTCTGATGACCCGTAATCTGATCTCTG 4860
QY 4861 AAGACAGAGCCCAAGAGTCAAGCTGTGTGGCAACATACCATCTCAACCTGCAATGGA 4920
Db 4861 AAGACAGAGCCCAAGAGTCAAGCTGTGTGGCAACATACCATCTCAACCTGCAATGGA 4920
QY 4921 AAGTTCCCAATTAAGATTTGAGAAATCTCCAGAGTCCAGCTGCTGCTCATACATACG 4980
Db 4921 AAGTTCCCAATTAAGATTTGAGAAATCTCCAGAGTCCAGCTGCTGCTCATACATACG 4980
QY 4981 ATACTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGCAGAGGAGCAAGATTTAGACG 5040
Db 4981 ATACTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGCAGAGGAGCAAGATTTAGACG 5040
QY 5041 CTTCAACAGAAAGGCTCAACAAAAGATGTCACTGAGTGTGTGCTGACCCCAAGAG 5100
Db 5041 CTTCAACAGAAAGGCTCAACAAAAGATGTCACTGAGTGTGTGCTGACCCCAAGAG 5100

```

OY 5101 AATTATGCTGCTGACAAAGTTGGCCAGAAAAACACATCATCTTAATCAATTA 5160
    |||||||
DB 5101 AATTATGCTGCTGACAAAGTTGGCCAGAAAAACACATCATCTTAATCAATTA 5160
    |||||||
OY 5161 CTGAAGAGACTACATCATCTTAATGAAGAAACAGATGCTGAGTTGTGTGAAGGACAC 5220
    |||||||
DB 5161 CTGAAGAGACTACATCATCTTAATGAAGAAACAGATGCTGAGTTGTGTGAAGGACAC 5220
    |||||||
OY 5221 TGAATATTTCTAGGAATTCGGGAGAGAAAAATGGGTAGTTAGCTATTTCTGGGAGACC 5280
    |||||||
DB 5221 TGAATATTTCTAGGAATTCGGGAGAGAAAAATGGGTAGTTAGCTATTTCTGGGAGACC 5280
    |||||||
OY 5281 AGTCTATTAAAGAAAGAAAAATGCGATGAGCATGATTTGAAGTGAAGAGAGATGG 5340
    |||||||
DB 5281 AGTCTATTAAAGAAAGAAAAATGCGATGAGCATGATTTGAAGTGAAGAGAGATGG 5340
    |||||||
OY 5341 TCAATGGAAGAAACCCAGAGTCCAAAGCGAGCAAGAAATCCAGAGACAGAAAGATCT 5400
    |||||||
DB 5341 TCAATGGAAGAAACCCAGAGTCCAAAGCGAGCAAGAAATCCAGAGACAGAAAGATCT 5400
    |||||||
OY 5401 TCAGGGGCTAGAAATCTGTGCTATGAGGCCCTTACCAACATGCCACAGATCACTGG 5460
    |||||||
DB 5401 TCAGGGGCTAGAAATCTGTGCTATGAGGCCCTTACCAACATGCCACAGATCACTGG 5460
    |||||||
OY 5461 AATGATGCTACAGCTGTGTGCTCTGTGTGAAGAGAGCTTCACTTCAACCTTG 5520
    |||||||
DB 5461 AATGATGCTACAGCTGTGTGCTCTGTGTGAAGAGAGCTTCACTTCAACCTTG 5520
    |||||||
OY 5521 GCACAGGTGTCACCCAAATTTGTTGTGCAAGCCAGATGCTGACAGAGCAATGGCT 5580
    |||||||
DB 5521 GCACAGGTGTCACCCAAATTTGTTGTGCAAGCCAGATGCTGACAGAGCAATGGCT 5580
    |||||||
OY 5581 TCCAGCAATTTGGGAGATGTGTGAGGACCTGTGTGATACCCGAGAGTGGGTGTGACA 5640
    |||||||
DB 5581 TCCAGCAATTTGGGAGATGTGTGAGGACCTGTGTGATACCCGAGAGTGGGTGTGACA 5640
    |||||||
OY 5641 GTTAGCACTTACCAAGTGCAGAGAGCTGACACCTACTATACCCAGATGCCCAACA 5700
    |||||||
DB 5641 GTTAGCACTTACCAAGTGCAGAGAGCTGACACCTACTATACCCAGATGCCCAACA 5700
    |||||||
OY 5701 GCCACTACTGA 5711
    |||||||
DB 5701 GCCACTACTGA 5711
    |||||||

```

```

RESULT 8
US-09-007-678B-47
; Sequence 47, Application US/09007678B
; Patent No. 6342483
; GENERAL INFORMATION:
; APPLICANT: HOIT, JEFFREY T.
; APPLICANT: JENSEN, ROY A.
; APPLICANT: PAGE, DAVID L.
; APPLICANT: OBERMILLER, PATRICE S.
; APPLICANT: ROBINSON-BENION, CHERYL L.
; APPLICANT: THOMPSON, MARLYN E.
; TITLE OF INVENTION: METHOD FOR DETECTION AND TREATMENT OF BREAST CANCER
; FILE REFERENCE: Attorney Docket No. 6342483 1242-1-2-2
; CURRENT FILING DATE: 1998-01-15
; PRIOR APPLICATION NUMBER: 08/373,799
; PRIOR FILING DATE: 1995-01-17
; PRIOR APPLICATION NUMBER: 08/182,961
; PRIOR FILING DATE: 1994-01-14
; NUMBER OF SEQ ID NOS: 61
; SOFTWARE: Microsoft Wordpad.
; SEQ ID NO 47
; LENGTH: 5712
; TYPE: DNA
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: (120)..(5708)

```

```

; NAME/KEY: misc.feature
; LOCATION: (4532)..(4535)
; OTHER INFORMATION: xaa-any amino acid
US-09-007-678B-47

Query Match
Best Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

99.9%; Score 5707.8; DB 4; Length 5712;
100.0%; Pred. No. 0;
Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY 1 AGCTGCTGAGACTTCCTGAGACCCGACACAGGCTGTGGGTTCTCAGATTAAGTGGCC 60
    |||||||
DB 1 AGCTGCTGAGACTTCCTGAGACCCGACACAGGCTGTGGGTTCTCAGATTAAGTGGCC 60
    |||||||
OY 61 CCTGGGCTCAGAGAGCCCTTCAACCCCTCTGCTGGGTAAAGTTCAATGGAAGAAAGAAA 120
    |||||||
DB 61 CCTGGGCTCAGAGAGCCCTTCAACCCCTCTGCTGGGTAAAGTTCAATGGAAGAAAGAAA 120
    |||||||
OY 121 TGGATTATCTGCTGCTTGGCTTGAAGAGTACAAATGTCATTAATGCTATGCAAGAAA 180
    |||||||
DB 121 TGGATTATCTGCTGCTTGGCTTGAAGAGTACAAATGTCATTAATGCTATGCAAGAAA 180
    |||||||
OY 181 TCTTAGAGTGTCCATCTGTCTGAGTTGATCAAGAACTGTCTCCACAAAGTGTGACC 240
    |||||||
DB 181 TCTTAGAGTGTCCATCTGTCTGAGTTGATCAAGAACTGTCTCCACAAAGTGTGACC 240
    |||||||
OY 241 ACATATTTTGCAGAAATTTGCAATGCTGGAACCTTCAACCAAGAAAGAGGCTTACAGT 300
    |||||||
DB 241 ACATATTTTGCAGAAATTTGCAATGCTGGAACCTTCAACCAAGAAAGAGGCTTACAGT 300
    |||||||
OY 301 GTCCCTTATGTAGAAATATTAACCAAGAGGCTCAAGAAAGTACGAGATTTAGTC 360
    |||||||
DB 301 GTCCCTTATGTAGAAATATTAACCAAGAGGCTCAAGAAAGTACGAGATTTAGTC 360
    |||||||
OY 361 AACTGTTGAAGAGCTATTTGAAAATCAATTTGGCTTTACCTTGACACAGGTTGGAGT 420
    |||||||
DB 361 AACTGTTGAAGAGCTATTTGAAAATCAATTTGGCTTTACCTTGACACAGGTTGGAGT 420
    |||||||
OY 421 ATGCAAAAGAGCTATTTTGCAGAAAGAAAGAAATTAATCTGCTGCAATCTTAAGATG 480
    |||||||
DB 421 ATGCAAAAGAGCTATTTTGCAGAAAGAAAGAAATTAATCTGCTGCAATCTTAAGATG 480
    |||||||
OY 481 AAGTTCTATCATCCAAAGTATGGGCTACAGAAACCGTGCCAAAGAGCTTACAGAGTG 540
    |||||||
DB 481 AAGTTCTATCATCCAAAGTATGGGCTACAGAAACCGTGCCAAAGAGCTTACAGAGTG 540
    |||||||
OY 541 AACCCGAAATTCCTTCTTTCAGAGAAACAGTCTCAGTCCAACTCTCTAAACCTGGAA 600
    |||||||
DB 541 AACCCGAAATTCCTTCTTTCAGAGAAACAGTCTCAGTCCAACTCTCTAAACCTGGAA 600
    |||||||
OY 601 CTGAGAGAACTGTGAGCAAGAAAGAGGATACAACTCAAAAGACGTCGTACATATG 660
    |||||||
DB 601 CTGAGAGAACTGTGAGCAAGAAAGAGGATACAACTCAAAAGACGTCGTACATATG 660
    |||||||
OY 661 AATGAGATCTGATTCCTCTAGACATACCGTTAATGAAGCAACTAATGCGAGTGGSAG 720
    |||||||
DB 661 AATGAGATCTGATTCCTCTAGACATACCGTTAATGAAGCAACTAATGCGAGTGGSAG 720
    |||||||
OY 721 ATCAAGAAATTTGTAACAATCAACCCCTCAAGAGAACAGGATGAAGTAATCGATTCTG 780
    |||||||
DB 721 ATCAAGAAATTTGTAACAATCAACCCCTCAAGAGAACAGGATGAAGTAATCGATTCTG 780
    |||||||
OY 781 CAAAAGAGGCTGCTGTAATTTCTGAGAGGATTAACAATACTGAATCAATCAAC 840
    |||||||
DB 781 CAAAAGAGGCTGCTGTAATTTCTGAGAGGATTAACAATACTGAATCAATCAAC 840
    |||||||
OY 841 CCAGTAATATGATTTGAACACCACTGAGAGCGTGCAGTGCAGAGGATCCAGAAAGT 900
    |||||||
DB 841 CCAGTAATATGATTTGAACACCACTGAGAGCGTGCAGTGCAGAGGATCCAGAAAGT 900
    |||||||
OY 901 ATCAGGGTATGTTGTTTCAAACTTGCATGTGTGAGCCATGTGGCACAAAATCACTATGCA 960
    |||||||
DB 901 ATCAGGGTATGTTGTTTCAAACTTGCATGTGTGAGCCATGTGGCACAAAATCACTATGCA 960
    |||||||

```


Db 3121 AAACTTGAGAACATTCATGTCACCTGAAAGAAATGGAATGAGAACATTCCAA 3180
Oy 3181 GTACAGTACGACCAATTTAGCCGTAAATAACATTAGAGAAATGTTTTTAAAGAGCCAGCT 3240
Db 3181 GTACAGTACGACCAATTTAGCCGTAAATAACATTAGAGAAATGTTTTTAAAGAGCCAGCT 3240
Oy 3241 CAGCAATATTAATGAAATAGGTTCCACTACTAATGAAATGAGGCTCCAGTATTAATGAAA 3300
Db 3241 CAGCAATATTAATGAAATAGGTTCCACTACTAATGAAATGAGGCTCCAGTATTAATGAAA 3300
Oy 3301 TAGGTTCCAGTATGAAACAAATTCAGACGAACTAGTAGAAGACAGAGGCCCCAAATGGA 3360
Db 3301 TAGGTTCCAGTATGAAACAAATTCAGACGAACTAGTAGAAGACAGAGGCCCCAAATGGA 3360
Oy 3361 ATGCTATCTTATGATTTAGGGTTTTCGCACTGAGGCTATTAACAAAGTCTTCCGTGAA 3420
Db 3361 ATGCTATCTTATGATTTAGGGTTTTCGCACTGAGGCTATTAACAAAGTCTTCCGTGAA 3420
Oy 3421 GTAATTTAGCATCTGAAATTAATAAAGCAAGAAATGAAAGAGTAGTTCAGACTGTTA 3480
Db 3421 GTAATTTAGCATCTGAAATTAATAAAGCAAGAAATGAAAGAGTAGTTCAGACTGTTA 3480
Oy 3481 ATACAGATTTCTCTCCATATCTGATTTAGATTAATGAAACAGGCTATGGAAGTAGTC 3540
Db 3481 ATACAGATTTCTCTCCATATCTGATTTAGATTAATGAAACAGGCTATGGAAGTAGTC 3540
Oy 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTTTAGATGATGTTGTAATTAAGG 3600
Db 3541 ATGATCTCAGGTTTGTCTGAGACACCTGATGACCTTTAGATGATGTTGTAATTAAGG 3600
Oy 3601 AAGATCTACTGTTTCTGTAATAATGACATTAGAGAAAGTCTGTTTATAGCAAAACCG 3660
Db 3601 AAGATCTACTGTTTCTGTAATAATGACATTAGAGAAAGTCTGTTTATAGCAAAACCG 3660
Oy 3661 TCCAGAAAGAGAGCTTAGACAGAGTCTAGCCCTTCCACCATPACATTTGGCTCAGG 3720
Db 3661 TCCAGAAAGAGAGCTTAGACAGAGTCTAGCCCTTCCACCATPACATTTGGCTCAGG 3720
Oy 3721 GTTACCGAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTGTAAGAGAG 3780
Db 3721 GTTACCGAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTGTAAGAGAG 3780
Oy 3781 AAGAGCTTCCCTGCTCCACACACTGTTATTTGGTAAAGTAACAAATATACCTCTCAGT 3840
Db 3781 AAGAGCTTCCCTGCTCCACACACTGTTATTTGGTAAAGTAACAAATATACCTCTCAGT 3840
Oy 3841 CTACTAGGCAATAGACCGCTTCTACCGAGTGTCTGTAAAGACACAGAGAGAAATTTAT 3900
Db 3841 CTACTAGGCAATAGACCGCTTCTACCGAGTGTCTGTAAAGACACAGAGAGAAATTTAT 3900
Oy 3901 TATCATTTGAAGAATAGCTTAATAGTCCACATTAACAGAGTAATTTGGCAAGAGCATCTC 3960
Db 3901 TATCATTTGAAGAATAGCTTAATAGTCCACATTAACAGAGTAATTTGGCAAGAGCATCTC 3960
Oy 3961 AGGAACATCACCTTAGTAGAGAAACAAATGTTCTGTAAGCTTTTCTTCCACAGTSCA 4020
Db 3961 AGGAACATCACCTTAGTAGAGAAACAAATGTTCTGTAAGCTTTTCTTCCACAGTSCA 4020
Oy 4021 GTGATTTGGAAGACTTACCTGCAAAATACAAACACCCAGAGATCTTTCTTGTGTTGTTCT 4080
Db 4021 GTGATTTGGAAGACTTACCTGCAAAATACAAACACCCAGAGATCTTTCTTGTGTTGTTCT 4080
Oy 4081 CCAAAACAATGAGCATCTGTAAGAGCCAGAGAGTGTCTGTAAGTACAGAAAGTAATGG 4140
Db 4081 CCAAAACAATGAGCATCTGTAAGAGCCAGAGAGTGTGTAGTACAGAAAGTAATGG 4140
Oy 4141 TTTGAGATGATGAAGAAAGAGAAAGGCTTGAAGAAATTAATCAAGAAAGAGCA 4200
Db 4141 TTTGAGATGATGAAGAAAGAGAAAGGCTTGAAGAAATTAATCAAGAAAGAGCA 4200
Oy 4201 TGGATTTCAAACTTGTGTAGACAGCATCTGGGTGTGAGAGTGAAGCAAGCCTCTGTAAG 4260
Db 4201 TGGATTTCAAACTTGTGTAGACAGCATCTGGGTGTGAGAGTGAAGCAAGCCTCTGTAAG 4260

Oy 4261 ACTGCTCAGGGCTATCTCTCAGAGTACATTTTAAACCACCTCAGACAGAGGATACCATGC 4320
Db 4261 ACTGCTCAGGGCTATCTCTCAGAGTACATTTTAAACCACCTCAGACAGAGGATACCATGC 4320
Oy 4321 AACATTAACCTTAAGCTCCAGAGAAATGGCTGAAGTCTGAAGCTGTGTTAGAACAGC 4380
Db 4321 AACATTAACCTTAAGCTCCAGAGAAATGGCTGAAGTCTGAAGCTGTGTTAGAACAGC 4380
Oy 4381 ATGGAGGACGCTTCTTAACAGCTAACCTTCATCATTAAGTACTCTTCCGCTTGAGG 4440
Db 4381 ATGGAGGACGCTTCTTAACAGCTAACCTTCATCATTAAGTACTCTTCCGCTTGAGG 4440
Oy 4441 ACCTGCGAAATTCAGAACAAAGACATAGAAAAAGCGTATTAATCTTCAAGAAAGTA 4500
Db 4441 ACCTGCGAAATTCAGAACAAAGACATAGAAAAAGCGTATTAATCTTCAAGAAAGTA 4500
Oy 4501 GTGAATACCTTATTAAGCCAGAAATCCAGAAAGGCTTCTGTCAGCAAGTTTGAGTGTG 4560
Db 4501 GTGAATACCTTATTAAGCCAGAAATCCAGAAAGGCTTCTGTCAGCAAGTTTGAGTGTG 4560
Oy 4561 CAGATAGTTCTACAGTAAAAATAAAGAACAGAGTGAAGAGTCAATCCCTCTTAAT 4620
Db 4561 CAGATAGTTCTACAGTAAAAATAAAGAACAGAGTGAAGAGTCAATCCCTCTTAAT 4620
Oy 4621 GCCCATCTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 4680
Db 4621 GCCCATCTTATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 4680
Oy 4681 ACTACCCATCTCAAGAGAGGCTCATTAAGTTGTTGATGATGATGATGATGATGATGATGAT 4740
Db 4681 ACTACCCATCTCAAGAGAGGCTCATTAAGTTGTTGATGATGATGATGATGATGATGATGAT 4740
Oy 4741 AGTCTGGGCGCACAGATTTGACGGAACATTTACTTCCCAAGGCAAGATCTAGAGGAA 4800
Db 4741 AGTCTGGGCGCACAGATTTGACGGAACATTTACTTCCCAAGGCAAGATCTAGAGGAA 4800
Oy 4801 CCCCTTACCTGGAATCTGGAATCAGGCTCTCTGTAAGAGCCCTGAATCTGATCCTGTG 4860
Db 4801 CCCCTTACCTGGAATCTGGAATCAGGCTCTCTGTAAGAGCCCTGAATCTGATCCTGTG 4860
Oy 4861 AAGACAGAGCCCGAGAGTACGCTGTGTGCAACATACATCTTCAACCTCTGATTTGA 4920
Db 4861 AAGACAGAGCCCGAGAGTACGCTGTGTGCAACATACATCTTCAACCTCTGATTTGA 4920
Oy 4921 AAGTCCCAATTTGAAGTTGCAAGATCTGCCAGAGTCCAGCTGCTCATACTACTG 4980
Db 4921 AAGTCCCAATTTGAAGTTGCAAGATCTGCCAGAGTCCAGCTGCTCATACTACTG 4980
Oy 4981 ATACTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGAGGAGGAGGAGGAGGAGGAGG 5040
Db 4981 ATACTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGAGGAGGAGGAGGAGGAGGAGG 5040
Oy 5041 CTTCACAGAAAGGGTCAACAAAGAAATGTCATGTTGTTGCTGCTGAGCCAGAG 5100
Db 5041 CTTCACAGAAAGGGTCAACAAAGAAATGTCATGTTGTTGCTGCTGAGCCAGAG 5100
Oy 5101 AATTTATGCTGCTGATCAAGTTTCCAGAAACACCATCACTTAATCAATCAATTA 5160
Db 5101 AATTTATGCTGCTGATCAAGTTTCCAGAAACACCATCACTTAATCAATCAATTA 5160
Oy 5161 CTGAAGAGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 5220
Db 5161 CTGAAGAGATCTGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGAT 5220
Oy 5221 TGAATATTTTCTAGGAATTCGGAGAGAAATGGTATGATGATTTCTGAGGTGAGCC 5280
Db 5221 TGAATATTTTCTAGGAATTCGGAGAGAAATGGTATGATGATTTCTGAGGTGAGCC 5280
Oy 5281 AGTCTATTTAAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTGAAGAGATGTGG 5340
Db 5281 AGTCTATTTAAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTGAAGAGATGTGG 5340


```
|||||
Db 601 CTGAGAGACTCTGAGCAAAAGCAGGAGATACAACTCAAAACGCTCTCTACATNTG 660
Oy 661 AATTGGATCTGATTTCTTGAGATACCGTTAATPAAGCACTTTATTCAGTGGAG 720
Db 661 AATTGGATCTGATTTCTTGAGATACCGTTAATPAAGCACTTTATTCAGTGGAG 720
Oy 721 ATCAGAAATGTTCAATCAATCCCTCAAGGAACGAGGATGAATCAGTTGGATCTG 780
Db 721 ATCAGAAATGTTCAATCAATCCCTCAAGGAACGAGGATGAATCAGTTGGATCTG 780
Oy 781 CAAAAAGGCGCTTGTAATTTCTGAGAGGATGTACAAATACTGACATATCAGAC 840
Db 781 CAAAAAGGCGCTTGTAATTTCTGAGAGGATGTACAAATACTGACATATCAGAC 840
Oy 841 CCAGTAATATGATTTGAGACCACTGAGAGCGCTGAGAGCGATCCAGAAAAGT 900
Db 841 CCAGTAATATGATTTGAGACCACTGAGAGCGCTGAGAGCGATCCAGAAAAGT 900
Oy 901 ATCAGGATGTTCTGTTCAAACTTGATGTGAGGATGAGGATGAGCAAAATCTCATGCA 960
Db 901 ATCAGGATGTTCTGTTCAAACTTGATGTGAGGATGAGGATGAGCAAAATCTCATGCA 960
Oy 961 GCTCATTTACAGCATGAGACAGCAGTTTATCTACTATAAGACAGATGATGTAGAA 1020
Db 961 GCTCATTTACAGCATGAGACAGCAGTTTATCTACTATAAGACAGATGATGTAGAA 1020
Oy 1021 AGGCTGATTTCTGTAATPAAGCAACGCTGGCTTACAGAGGAGCCACATACAGAT 1080
Db 1021 AGGCTGATTTCTGTAATPAAGCAACGCTGGCTTACAGAGGAGCCACATACAGAT 1080
Oy 1081 GGGCTGGAATGTAAGGAACATGTATGTATGAGGAGCTCCAGACAGAAAAAGGATG 1140
Db 1081 GGGCTGGAATGTAAGGAACATGTATGTATGAGGAGCTCCAGACAGAAAAAGGATG 1140
Oy 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGGAATPAAGCAAACTGGCATGCT 1200
Db 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGGAATPAAGCAAACTGGCATGCT 1200
Oy 1201 CAGGAATCTCTAGAGATACGAGATGTTCTTGATPAACCTAATAGCAGATTGAGA 1260
Db 1201 CAGGAATCTCTAGAGATACGAGATGTTCTTGATPAACCTAATAGCAGATTGAGA 1260
Oy 1261 AAGTAATGAGTGGTTTCCGAAAGTGTGAACGTGTAAGTTGATGACACATGATG 1320
Db 1261 AAGTAATGAGTGGTTTCCGAAAGTGTGAACGTGTAAGTTGATGACACATGATG 1320
Oy 1321 GGGAGTCTGAATCAAAATGCCAAATAGCTGATGATTGAGAGCTCTAATAGGTTAG 1380
Db 1321 GGGAGTCTGAATCAAAATGCCAAATAGCTGATGATTGAGAGCTCTAATAGGTTAG 1380
Oy 1381 AATATTTCTGTTCTTCAGAGAAATAGACTTACTGCGCAGATGATCCCTCATAGGCTTTAA 1440
Db 1381 AATATTTCTGTTCTTCAGAGAAATAGACTTACTGCGCAGATGATCCCTCATAGGCTTTAA 1440
Oy 1441 TATATAAAGTGAAGAGTCTCACTCAATAGTAGAGATGAATATGAAGCAAAATAT 1500
Db 1441 TATATAAAGTGAAGAGTCTCACTCAATAGTAGAGATGAATATGAAGCAAAATAT 1500
Oy 1501 TTGGGAAACCTATCTGAGAGAGCAAGCCTCCCAACTTAAGCATATGTAATCAAAATC 1560
Db 1501 TTGGGAAACCTATCTGAGAGAGCAAGCCTCCCAACTTAAGCATATGTAATCAAAATC 1560
Oy 1561 TAATTAATAGAGCAATTTGTAAGTACGACCAAGATTAATCAAGAGCGTCCCTCAATA 1620
Db 1561 TAATTAATAGAGCAATTTGTAAGTACGACCAAGATTAATCAAGAGCGTCCCTCAATA 1620
Oy 1621 AATTAAGCGTAAAGAGGAGCTTACATGAGGCTTCACTCCGAGAGATTTTATCAAGAA 1680
Db 1621 AATTAAGCGTAAAGAGGAGCTTACATGAGGCTTCACTCCGAGAGATTTTATCAAGAA 1680
Oy 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAATCAACCAAGCGAGC 1740
Db 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAATCAACCAAGCGAGC 1740
|||||
Db 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAATCAACCAAGCGAGC 1740
Oy 1741 AGAATGGTCAAGTATGATTTTACTAATAGTGTGATGAGAAATPAAGCAAAAGTGAT 1800
Db 1741 AGAATGGTCAAGTATGATTTTACTAATAGTGTGATGAGAAATPAAGCAAAAGTGAT 1800
Oy 1801 CTATTCAGAAATGAGAAAAATCTTAACCAATAGAAATCCTGAAAAAGATCTGTTTCA 1860
Db 1801 CTATTCAGAAATGAGAAAAATCTTAACCAATAGAAATCCTGAAAAAGATCTGTTTCA 1860
Oy 1861 AAGCAAAAGCTGAACCTATPAAGCAGAGTATPAAGCAATATGAACTGCAATTAATATCC 1920
Db 1861 AAGCAAAAGCTGAACCTATPAAGCAGAGTATPAAGCAATATGAACTGCAATTAATATCC 1920
Oy 1921 ACAATTCAAAAGCAGCTTAAGAAATAGGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1980
Db 1921 ACAATTCAAAAGCAGCTTAAGAAATAGGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1980
Oy 1981 ATGCGCTTGAACCTAGTATGATGAAATCTAAGCCCACTAATGTACTGAATGCAAA 2040
Db 1981 ATGCGCTTGAACCTAGTATGATGAAATCTAAGCCCACTAATGTACTGAATGCAAA 2040
Oy 2041 TTGATAGTTGTTCTAGCAGTGAAGATPAAGAAAAAGTACAAACCAATATGCAATCA 2100
Db 2041 TTGATAGTTGTTCTAGCAGTGAAGATPAAGAAAAAGTACAAACCAATATGCAATCA 2100
Oy 2101 GGCACAGCAGAAACCTACACTCATGGAAGTAAAGAACTGCAACCTGAGACCAAGAA 2160
Db 2101 GGCACAGCAGAAACCTACACTCATGGAAGTAAAGAACTGCAACCTGAGACCAAGAA 2160
Oy 2161 GTAACAGCCAAATGAACAGACAGATTAAGATGACAGTATCTTCCAGAGCTGA 2220
Db 2161 GTAACAGCCAAATGAACAGACAGATTAAGATGACAGTATCTTCCAGAGCTGA 2220
Oy 2221 AGTTAACAATGCACTGGTCTTTTACTAAGTCTCAATATACAGTGAACCTTAAGAT 2280
Db 2221 AGTTAACAATGCACTGGTCTTTTACTAAGTCTCAATATACAGTGAACCTTAAGAT 2280
Oy 2281 TTGTCATCTCTAGGCTTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2340
Db 2281 TTGTCATCTCTAGGCTTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2340
Oy 2341 CTAATTAATGCTGAGAGACCCCAAGATCTCATGTTAAGTGAAGAGGTTTGCAAACTG 2400
Db 2341 CTAATTAATGCTGAGAGACCCCAAGATCTCATGTTAAGTGAAGAGGTTTGCAAACTG 2400
Oy 2401 AAGATCTGTAGAGATGACAGTATTCATTGTAACCTGTAAGTATGACACTCAGG 2460
Db 2401 AAGATCTGTAGAGATGACAGTATTCATTGTAACCTGTAAGTATGACACTCAGG 2460
Oy 2461 AAGATATCTGTTACTGGAATGAGCACTTAAGGAGAGGCAAAACAGAACCAATTAAT 2520
Db 2461 AAGATATCTGTTACTGGAATGAGCACTTAAGGAGAGGCAAAACAGAACCAATTAAT 2520
Oy 2521 GTGTGAGTCACTGAGAGCAATTTGAAAAACCCCAAGGAGCTAATTCATGTTGTCCAA 2580
Db 2521 GTGTGAGTCACTGAGAGCAATTTGAAAAACCCCAAGGAGCTAATTCATGTTGTCCAA 2580
Oy 2581 ATAAATAGAAATGACAGAAAGGCTTTAAGTATCCATTGGAGCATGAATTAACCAAGTC 2640
Db 2581 ATAAATAGAAATGACAGAAAGGCTTTAAGTATCCATTGGAGCATGAATTAACCAAGTC 2640
Oy 2641 GGGAAACAGCATAGAAATGAGCAAAAGTGAACCTTGATGCTCAATTTTGCAGATATC 2700
Db 2641 GGGAAACAGCATAGAAATGAGCAAAAGTGAACCTTGATGCTCAATTTTGCAGATATC 2700
Oy 2701 TCAAGGTTTCAAAAGCGCAGCATTTGCTGTTTCAAAATCCAGAAATCCAGAAAGG 2760
Db 2701 TCAAGGTTTCAAAAGCGCAGCATTTGCTGTTTCAAAATCCAGAAATCCAGAAAGG 2760
Oy 2761 AATGTGCAACATTTCTGCCACTCTGGGCTCTTAAAGAAACAAAGTCCAAAGTCACTT 2820
Db 2761 AATGTGCAACATTTCTGCCACTCTGGGCTCTTAAAGAAACAAAGTCCAAAGTCACTT 2820
```

QY	2821	TTGAATGTGAAACAAAAGAGAAAATTCAGGAAGAAATGAGTCTATATATCAAGCCTGTAC	2880
Db	2821	TTGAATGTGAAACAAAAGAGAAAATTCAGGAAGAAAGAGTCTATATATCAAGCCTGTAC	2880
QY	2881	AGACAGTTAATATCTAGCTCAGAGCTTCTGTGTGGTGTCAGAAAGATTAAGCAGTGTATA	2940
Db	2881	AGACAGTTAATATCTAGCTCAGAGCTTCTGTGTGGTGTCAGAAAGATTAAGCAGTGTATA	2940
QY	2941	ATGCCAAATGTATGATATCAAAAGAGGCTCTAGGTTTTGTCATATCTCAGTTCAAGAGCA	3000
Db	2941	ATGCCAAATGTATGATATCAAAAGAGGCTCTAGGTTTTGTCATATCTCAGTTCAAGAGCA	3000
QY	3001	ACGAACATCGAGACTCTTACTCTCCAAATTAACATGAGCTTTTACAAAACCATATGATATAC	3060
Db	3001	ACGAACATCGAGACTCTTACTCTCCAAATTAACATGAGCTTTTACAAAACCATATGATATAC	3060
QY	3061	CACCACTTTTCCCATCAAGTCACTTTTGTAAAACTAAATGTAAAGAAAATCTGCTAGAGG	3120
Db	3061	CACCACTTTTCCCATCAAGTCACTTTTGTAAAACTAAATGTAAAGAAAATCTGCTAGAGG	3120
QY	3121	AAAATTGTAGGAACATTCATATGTCACCTGAAAAGAAATGGGAAATGAGAACTTCOCA	3180
Db	3121	AAAATTGTAGGAACATTCATATGTCACCTGAAAAGAAATGGGAAATGAGAACTTCOCA	3180
QY	3181	GTACAGTGAAGACATTTAGCCGTATATACTATTGTTAAAACTAAATGTAAAGAAAATCTGCTAGAGG	3240
Db	3181	GTACAGTGAAGACATTTAGCCGTATATACTATTGTTAAAACTAAATGTAAAGAAAATCTGCTAGAGG	3240
QY	3241	CAAGCAATATTAATGAACTAGTTCACACTAATGAAGTGGGCTCCAGTATTAATGAA	3300
Db	3241	CAAGCAATATTAATGAACTAGTTCACACTAATGAAGTGGGCTCCAGTATTAATGAA	3300
QY	3301	TAGGTTCCAGTGAATGAAAACATTCACAGCAGAACTAGTGAAGAAACAGAGGGCCAAATTTGA	3360
Db	3301	TAGGTTCCAGTGAATGAAAACATTCACAGCAGAACTAGTGAAGAAACAGAGGGCCAAATTTGA	3360
QY	3361	ATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGGCTATTAACCAAAGTCTCTGGAA	3420
Db	3361	ATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGGCTATTAACCAAAGTCTCTGGAA	3420
QY	3421	GTAATGTAGACATCCGAAATTAAGAAAAGCAAGAAATTAAGAAAGTGTAGACTGTTA	3480
Db	3421	GTAATGTAGACATCCGAAATTAAGAAAAGCAAGAAATTAAGAAAGTGTAGACTGTTA	3480
QY	3481	ATACAGATTTCTCTCCATATCTGATTTGAGTAACTTAGAACACGCTATGGAAGTATGTC	3540
Db	3481	ATACAGATTTCTCTCCATATCTGATTTGAGTAACTTAGAACACGCTATGGAAGTATGTC	3540
QY	3541	ATGATATCAGGTTGTTCTGAGACACCTGATGACCTGTGATGATATGCTGAATTAAGG	3600
Db	3541	ATGATATCAGGTTGTTCTGAGACACCTGATGACCTGTGATGATATGCTGAATTAAGG	3600
QY	3601	AAGATACTAGTTTGTCTGAAAATGACATTAAGAAAAGTTGCTGTTTTAGCAAAAACGG	3660
Db	3601	AAGATACTAGTTTGTCTGAAAATGACATTAAGAAAAGTTGCTGTTTTAGCAAAAACGG	3660
QY	3661	TCCAGAAAAGAGAGCTTATGACAGAGAGTCTTACCCCTTTACACCATTAATTTGGCTCAGG	3720
Db	3661	TCCAGAAAAGAGAGCTTATGACAGAGAGTCTTACCCCTTTACACCATTAATTTGGCTCAGG	3720
QY	3721	GTTACCGAAGAGGGGCCAAGAAATTAAGAGTCTCTAGAAAGAACTTATCTATGATGAGATG	3780
Db	3721	GTTACCGAAGAGGGGCCAAGAAATTAAGAGTCTCTAGAAAGAACTTATCTATGATGAGATG	3780
QY	3781	AAGAGCTTCCCTGCTTCCACACTTGTATTGTTGTTAAAGTAAACAAATATACCTTCTCAGT	3840
Db	3781	AAGAGCTTCCCTGCTTCCACACTTGTATTGTTGTTAAAGTAAACAAATATACCTTCTCAGT	3840
QY	3841	CTACTAGGCATAGACCGGTGCTATCCGAGTGTCTGTCTAAGAACACAGAGAGCAATTTAT	3900
Db	3841	CTACTAGGCATAGACCGGTGCTATCCGAGTGTCTGTCTAAGAACACAGAGAGCAATTTAT	3900

QY	3901	TATCATGTGAAGATAGCTTAATTAATGACTGAGTAACCAAGATATATTTGGCAAAAGGATATCTC	3960
Db	3901	TATCATGTGAAGATAGCTTAATTAATGACTGAGTAACCAAGATATATTTGGCAAAAGGATATCTC	3960
QY	3961	AGGAACATCACCTTGTAGTGAAGAAACAAATGTTCTGTAGCTGTGTTTCTTCACAGTSCA	4020
Db	3961	AGGAACATCACCTTGTAGTGAAGAAACAAATGTTCTGTAGCTGTGTTTCTTCACAGTSCA	4020
QY	4021	GTGAATTTGGAAGACTTGTGACTGCAATTACAAACCCAGAGTCTTTCTTGATTTGGTTCCTT	4080
Db	4021	GTGAATTTGGAAGACTTGTGACTGCAATTACAAACCCAGAGTCTTTCTTGATTTGGTTCCTT	4080
QY	4081	CCAAACAATGTAGGATCATAGTCTGAAGCCAGAGAGTGTGGCTGTAGTACAAAGAAATTTGG	4140
Db	4081	CCAAACAATGTAGGATCATAGTCTGAAGCCAGAGAGTGTGGCTGTAGTACAAAGAAATTTGG	4140
QY	4141	TTTCAGATGATGAGAAAGAGGAGACGGGCTTGGAAGAAATATCATAGAGAGCAAGCA	4200
Db	4141	TTTCAGATGATGAGAAAGAGGAGACGGGCTTGGAAGAAATATCATAGAGAGCAAGCA	4200
QY	4201	TGGATTCAAACTTAGTGTAGAGAGCATGCGGGTGTGAGAGTGAACCAAGCGCTGTGAG	4260
Db	4201	TGGATTCAAACTTAGTGTAGAGAGCATGCGGGTGTGAGAGTGAACCAAGCGCTGTGAG	4260
QY	4261	ACTGCTCAGGGCTATCTCTCAGATGCAATTTTAACCACTCAGAGAGGATACCATGC	4320
Db	4261	ACTGCTCAGGGCTATCTCTCAGATGCAATTTTAACCACTCAGAGAGGATACCATGC	4320
QY	4321	AACATTAACCTGTAAAGCTCCAGCGAGAAATGGCGAATGAAGCTGTGTAGAACGC	4380
Db	4321	AACATTAACCTGTAAAGCTCCAGCGAGAAATGGCGAATGAAGCTGTGTAGAACGC	4380
QY	4381	ATGGAGAGCCAGCCTTCTTAACAGCTACCCCTTCATCATTAAGTACTCTTCTCCCTTGAGG	4440
Db	4381	ATGGAGAGCCAGCCTTCTTAACAGCTACCCCTTCATCATTAAGTACTCTTCTCCCTTGAGG	4440
QY	4441	ACCTGCGAAATCCAGAAACAAAGCAATATAGAAAAAGCAGTATTAATCTCAGAAAAAGTA	4500
Db	4441	ACCTGCGAAATCCAGAAACAAAGCAATATAGAAAAAGCAGTATTAATCTCAGAAAAAGTA	4500
QY	4501	GTGAATACCCATTAAGCCAGAAATCCAGAAAGCCCTTTCGCTGACAAAGTTTGAGGTGCTCG	4560
Db	4501	GTGAATACCCATTAAGCCAGAAATCCAGAAAGCCCTTTCGCTGACAAAGTTTGAGGTGCTCG	4560
QY	4561	CAGATAGTTCACAGCTAAAAATTAAGAACCAAGAGTGTGAAGAGTCACTCCCTTCTTAAT	4620
Db	4561	CAGATAGTTCACAGCTAAAAATTAAGAACCAAGAGTGTGAAGAGTCACTCCCTTCTTAAT	4620
QY	4621	GCCCATCATTAAGATATAGTGTGTGTGCATGACAGTGTCTGTGGAGTCTTCAGAAATAGAA	4680
Db	4621	GCCCATCATTAAGATATAGTGTGTGTGCATGACAGTGTCTGTGGAGTCTTCAGAAATAGAA	4680
QY	4681	ACTACCCATCTCAAGAGAGGCTCATTTAAGGTTGTGATGTGAGAGCAACAGCTGGAG	4740
Db	4681	ACTACCCATCTCAAGAGAGGCTCATTTAAGGTTGTGATGTGAGAGCAACAGCTGGAG	4740
QY	4741	AGTCGGGCGCACAGATTTGAAGCGAAACATCTTAATCTCCCAAGGCAAGATATTAAGGAA	4800
Db	4741	AGTCGGGCGCACAGATTTGAAGCGAAACATCTTAATCTCCCAAGGCAAGATATTAAGGAA	4800
QY	4801	CCCCCTTACCTGGAAATCTGGAAATCAGCCCTTCTCTGTAGTGAACCTGAATCTGTATCTCTG	4860
Db	4801	CCCCCTTACCTGGAAATCTGGAAATCAGCCCTTCTCTGTAGTGAACCTGAATCTGTATCTCTG	4860
QY	4861	AAGACAGAGCCCGACAGTCACTGTGTGGCAACATACATCTTCAACCTCTGCAATTGA	4920
Db	4861	AAGACAGAGCCCGACAGTCACTGTGTGGCAACATACATCTTCAACCTCTGCAATTGA	4920
QY	4921	AAGTTTCCCAATTAAGATGTGACAAATCTGCCAGAGTCAAGCGTGTGCTCATCTACTG	4980
Db	4921	AAGTTTCCCAATTAAGATGTGACAAATCTGCCAGAGTCAAGCGTGTGCTCATCTACTG	4980
QY	4981	ATATGCTGGGATTAATGCAATGAGAAAGTGTGACAGAGGAAACCCAGAAATTTGACAG	5040

```

Db      4981 ATACGCTGGTATATGCAATGGAAGAGTGTGAGCGAGGAGAGCCAGATTCACAG 5040
QY      5041 CTTCAACGAAGAGGTCACAAAGATGTCATGTGTGCTGCGCCGACCCAGAG 5100
Db      5041 CTTCAACGAAGAGGTCACAAAGATGTCATGTGTGCTGCGCCGACCCAGAG 5100
QY      5101 AATTTATGCTGCTGTACAGTTTGGCAGAAACACCATCTTAATCTAATTA 5160
Db      5101 AATTTATGCTGCTGTACAGTTTGGCAGAAACACCATCTTAATCTAATTA 5160
QY      5161 CTGAAGAGACTACTCATGTTGTTATGAAAACAGATCTGAGTTGTGTGACGAGAC 5220
Db      5161 CTGAAGAGACTACTCATGTTGTTATGAAAACAGATCTGAGTTGTGTGACGAGAC 5220
QY      5221 TGAATATTTTCTAGGAATTTGGGAGAGAAATGGGTAGTTAGCTATTTCTGGTGACCC 5280
Db      5221 TGAATATTTTCTAGGAATTTGGGAGAGAAATGGGTAGTTAGCTATTTCTGGTGACCC 5280
QY      5281 AGTCTATTAAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCAGAGAGATGTGG 5340
Db      5281 AGTCTATTAAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCAGAGAGATGTGG 5340
QY      5341 TCAATGGAAGAAACCAACAGGTCCAAAGCGAGAGAGAAATCCAGACAGAAAGATCT 5400
Db      5341 TCAATGGAAGAAACCAACAGGTCCAAAGCGAGAGAGAAATCCAGACAGAAAGATCT 5400
QY      5401 TCAGAGGGGCTAGAAATCTGTGCTATTTGGGCGCTTACCAACATGCCACAGATCACTGG 5460
Db      5401 TCAGAGGGGCTAGAAATCTGTGCTATTTGGGCGCTTACCAACATGCCACAGATCACTGG 5460
QY      5461 AATGATGATGATGAGTGTGTGTGCTTGTGTGTAAGAGAGTTTATCATCATCACCCCTGG 5520
Db      5461 AATGATGATGATGAGTGTGTGTGCTTGTGTGTAAGAGAGTTTATCATCATCACCCCTGG 5520
QY      5521 GCACAGGTGTCCACCAATTTGTGTTGTGTCACACAGATGCTTGCAGAGAGCAATGTGCT 5580
Db      5521 GCACAGGTGTCCACCAATTTGTGTTGTGTCACACAGATGCTTGCAGAGAGCAATGTGCT 5580
QY      5581 TCCATGCAATTTGGGAGATGTGTGAGGACACCTGTGTGTGACCCGAGAGTGGTGTGGACA 5640
Db      5581 TCCATGCAATTTGGGAGATGTGTGAGGACACCTGTGTGTGACCCGAGAGTGGTGTGGACA 5640
QY      5641 GTGTGACACTCTACAGTGTGCGAGAGTGTGACACCTGATCTGATCCCAAGATCCCCACA 5700
Db      5641 GTGTGACACTCTACAGTGTGCGAGAGTGTGACACCTGATCTGATCCCAAGATCCCCACA 5700
QY      5701 GCCACTACTGA 5711
Db      5701 GCCACTACTGA 5711

```

RESULT 10
US-08-483-553-1
; Sequence 1, Application US/08483553
; Patent No. 5709999

GENERAL INFORMATION:

APPLICANT: Skolnick, Mark H.
APPLICANT: Goldfar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000

```

? CITY: Washington
? STATE: DC
? COUNTRY: USA
? ZIP: 20005
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? OPERATING SYSTEM: IBM PC compatible
? SOFTWARE: Patent Release #1.0, Version #1.30
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/483,553
? FILING DATE:
? CLASSIFICATION: 435
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/409,305
? FILING DATE: 24-MAR-1995
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/348,824
? FILING DATE: 29-NOV-1994
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/308,104
? FILING DATE: 16-SEP-1994
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/300,266
? FILING DATE: 02-SEP-1994
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/289,221
? FILING DATE: 12-AUG-1994
? ATTORNEY/AGENT INFORMATION:
? NAME: Ihnen, Jeffrey L.
? REGISTRATION NUMBER: 28,957
? REFERENCE/DOCKET NUMBER: 24884-109347
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: 202-962-4810
? TELEFAX: 202-962-8300
? INFORMATION FOR SEQ ID NO: 1:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 5914 base pairs
? TYPE: nucleic acid
? STRANDEDNESS: double
? TOPOLOGY: linear
? MOLECULE TYPE: cDNA
? HYPOTHETICAL: NO
? ANTI-SENSE: NO
? ORIGINAL SOURCE:
? ORGANISM: Homo sapiens
? FEATURE:
? NAME/KEY: CDS
? LOCATION: 120..5711
? US-08-483-553-1

```

Query Match 99.9%; Score 5707.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

QY      1 AGCTGCTGAGACTCTCGGACCCGCGACCGAGGCTGTGGGTTCTCGATACGGGCG 60
Db      1 AGCTGCTGAGACTCTCGGACCCGCGACCGAGGCTGTGGGTTCTCGATACGGGCG 60
QY      61 CTTGCGCTCAGAGAGGCTTCAACCCCTCTGCTGGTAAAGTTCATTGGAAGAGAGAA 120
Db      61 CTTGCGCTCAGAGAGGCTTCAACCCCTCTGCTGGTAAAGTTCATTGGAAGAGAGAA 120
QY      121 TGGATTATCTGCTCTTGGCGGTGAAGAGATGCAATGCTATGATGAGAA 180
Db      121 TGGATTATCTGCTCTTGGCGGTGAAGAGATGCAATGCTATGATGAGAA 180
QY      181 TCTTGAAGTGCCTGCTGCTGAGTGTGATCAAGAGACCTGTCCCAAGAGTGAAC 240
Db      181 TCTTGAAGTGCCTGCTGCTGAGTGTGATCAAGAGACCTGTCCCAAGAGTGAAC 240
QY      241 ACATATTTGCAAAATTTGCAATGCTGAAGACTTCTCAACAGAGAGAGGCTTCACAGT 300
Db      241 ACATATTTGCAAAATTTGCAATGCTGAAGACTTCTCAACAGAGAGAGGCTTCACAGT 300

```

Dd 241 ACATATTTTGCATAATTTTGCATGCTGAAACCTTCTCAACCGAAGAAAGGCCCTTCACAGT 300
Qy 301 GTCCCTTATGTAGAATGATATTAACCAAAAGAGGCGCTACAGAAAGTACAGATTATGTC 360
Dd 301 GTCCCTTATGTAGAATGATATTAACCAAAAGAGGCGCTACAGAAAGTACAGATTATGTC 360
Qy 361 AACTTGTGAAGAGCTATGAAAATCATTTGTGCTTTTCAAGCTTACACAGGTTGGAGT 420
Dd 361 AACTTGTGAAGAGCTATGAAAATCATTTGTGCTTTTCAAGCTTACACAGGTTGGAGT 420
Qy 421 ATGCAAAACAGCTATTAATTTTGCATAAAGAAAGAAATTAACCTCTCAACATCTTAAGAAAG 480
Dd 421 ATGCAAAACAGCTATTAATTTTGCATAAAGAAAGAAATTAACCTCTCAACATCTTAAGAAAG 480
Qy 481 AAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTCCGCAAAAGACTTCTACAGAGTG 540
Dd 481 AAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTCCGCAAAAGACTTCTACAGAGTG 540
Qy 541 AACCAGAAATCCTTCTCTGCAAGAAACCAAGTCTCAGTGTCCAACTCTCTAACTTGGAA 600
Dd 541 AACCAGAAATCCTTCTCTGCAAGAAACCAAGTCTCAGTGTCCAACTCTCTAACTTGGAA 600
Qy 601 CTGAGAGACTCTGAGCAAAAGCGAGGATTAACACCTCAAAAGAGCTGTCTCAATG 660
Dd 601 CTGAGAGACTCTGAGCAAAAGCGAGGATTAACACCTCAAAAGAGCTGTCTCAATG 660
Qy 661 AATTGGATCTGATTCCTCTGAGATACCGTTAATTAAGCACTTATTGCACTGTGGAG 720
Dd 661 AATTGGATCTGATTCCTCTGAGATACCGTTAATTAAGCACTTATTGCACTGTGGAG 720
Qy 721 ATCAAGAAATTTGTACAAATCACCCCTCAAGCAACGAGGATGAATACAGTTGGATTCTG 780
Dd 721 ATCAAGAAATTTGTACAAATCACCCCTCAAGCAACGAGGATGAATACAGTTGGATTCTG 780
Qy 781 CAAAAAAGGCTGCTTGTGAATTTTCTGAGAGGATGTAAACAACTGTAACATCATCAAC 840
Dd 781 CAAAAAAGGCTGCTTGTGAATTTTCTGAGAGGATGTAAACAACTGTAACATCATCAAC 840
Qy 841 CCAGTAATATGATTTGTAACACCACTGAGAAAGCGTGCAGCTGAGAGGATCCAGAAAGT 900
Dd 841 CCAGTAATATGATTTGTAACACCACTGAGAAAGCGTGCAGCTGAGAGGATCCAGAAAGT 900
Qy 901 ATCAGGATAGTTCGTTTCAAACTTGCATGTGGAGCCATGTGGCAAAATACTCATGCCA 960
Dd 901 ATCAGGATAGTTCGTTTCAAACTTGCATGTGGAGCCATGTGGCAAAATACTCATGCCA 960
Qy 961 GCTCATTTACAGCATGAGAAACAGCAAGTATTACTCATAAAGACAGAAATGAATGTAGAAA 1020
Dd 961 GCTCATTTACAGCATGAGAAACAGCAAGTATTACTCATAAAGACAGAAATGAATGTAGAAA 1020
Qy 1021 AGGCTGAATTTCTGTAAATAAAGCAAAACAGCTGCTTGTAGCAAGAGCCAACTAACAGAT 1080
Dd 1021 AGGCTGAATTTCTGTAAATAAAGCAAAACAGCTGCTTGTAGCAAGAGCCAACTAACAGAT 1080
Qy 1081 GGGCTGGAAGTAAAGAAACATGTAAATAGCGGAGCTCCAGCACAGAAAAAAGGTAG 1140
Dd 1081 GGGCTGGAAGTAAAGAAACATGTAAATAGCGGAGCTCCAGCACAGAAAAAAGGTAG 1140
Qy 1141 ATCTGAATGCTGATCCCTGTGTGAGAAAAAGAAATGAAGAGAAACCTGCATGCT 1200
Dd 1141 ATCTGAATGCTGATCCCTGTGTGAGAAAAAGAAATGAAGAGAAACCTGCATGCT 1200
Qy 1201 CAGAGAAATCTAGAGATACCTGAAGATGTTCTTGGATTAACACTAAATAGCAGCAATTCAGA 1260
Dd 1201 CAGAGAAATCTAGAGATACCTGAAGATGTTCTTGGATTAACACTAAATAGCAGCAATTCAGA 1260
Qy 1261 AAGTTAATGAGTGGTTTCCGAAAGTGAATGAACTGTTGCTGATACCTCACTGATG 1320
Dd 1261 AAGTTAATGAGTGGTTTCCGAAAGTGAATGAACTGTTGCTGATACCTCACTGATG 1320
Qy 1321 GGGAGTCTGAATCAAAATGCCAAAGTAGCTGATGATTGAGAGCTTCAATGAGAGATG 1380
Dd 1321 GGGAGTCTGAATCAAAATGCCAAAGTAGCTGATGATTGAGAGCTTCAATGAGAGATG 1380

Qy 1381 AATATTCGTGTTCTTCAGAGAAATAGACTTACTGGCCAGTATCTCATAGGCTTTAA 1440
Dd 1381 AATATTCGTGTTCTTCAGAGAAATAGACTTACTGGCCAGTATCTCATAGGCTTTAA 1440
Qy 1441 TATGTAAAGTGAAGAGCTTCACTCCAAATCAGTAGAGATTAATTTGAAAGCAAAATAT 1500
Dd 1441 TATGTAAAGTGAAGAGCTTCACTCCAAATCAGTAGAGATTAATTTGAAAGCAAAATAT 1500
Qy 1501 TTGGAAAAACCTATGGAAGAAAGGCAACCTCCCACTTAAGCACTGTAACATAATC 1560
Dd 1501 TTGGAAAAACCTATGGAAGAAAGGCAACCTCCCACTTAAGCACTGTAACATAATC 1560
Qy 1561 TAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCTGCCCTCAAAATA 1620
Dd 1561 TAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCTGCCCTCAAAATA 1620
Qy 1621 AATTAAAGCGTAAAGAGAGACCTTACATAGGCTTCACTCTGAGAGATTTTATCAAGAA 1680
Dd 1621 AATTAAAGCGTAAAGAGAGACCTTACATAGGCTTCACTCTGAGAGATTTTATCAAGAA 1680
Qy 1681 CAGATTTGGCAGTTCAAAAGAGCTCCTGAAATGATTAATCAGGAACTTACCAAAAGGAG 1740
Dd 1681 CAGATTTGGCAGTTCAAAAGAGCTCCTGAAATGATTAATCAGGAACTTACCAAAAGGAG 1740
Qy 1741 AGAATGCTCAAGTGAATATTAATTAAGTGTGATAGAGATTAATCAAAAGGATG 1800
Dd 1741 AGAATGCTCAAGTGAATATTAATTAAGTGTGATAGAGATTAATCAAAAGGATG 1800
Qy 1801 CTATTCAGAAATGAGAAAAATCCTTAACCAATTAAGATCACTGGAAGAAATCTGCTTCA 1860
Dd 1801 CTATTCAGAAATGAGAAAAATCCTTAACCAATTAAGATCACTGGAAGAAATCTGCTTCA 1860
Qy 1861 AAACAGAAAGCTGAACCTTAAGAGAGCACTAATTAACCAATGGAATGGAATTAATATTC 1920
Dd 1861 AAACAGAAAGCTGAACCTTAAGAGAGCACTAATTAACCAATGGAATGGAATTAATATTC 1920
Qy 1921 ACAATTTCAAAAGCACTTAAGAAAGATTAAGAGAGAGAGAGAGAGAGAGAGAGAGATTC 1980
Dd 1921 ACAATTTCAAAAGCACTTAAGAAAGATTAAGAGAGAGAGAGAGAGAGAGAGAGATTC 1980
Qy 1981 ATGCGCTGAATCTACTAGTGAATCTGAAGCCCACTTAATGTAAGTAATGCAAA 2040
Dd 1981 ATGCGCTGAATCTACTAGTGAATCTGAAGCCCACTTAATGTAAGTAATGCAAA 2040
Qy 2041 TTGATAGTGTGTTCTAGCAGTAGAGATTAAGAAAAAATAGCAACCAATGGCACTCA 2100
Dd 2041 TTGATAGTGTGTTCTAGCAGTAGAGATTAAGAAAAAATAGCAACCAATGGCACTCA 2100
Qy 2101 GGCACAGCAAAACCTACACTCATGGAAGTAAAGAACTGTCAACTGAGGCCAAGAGA 2160
Dd 2101 GGCACAGCAAAACCTACACTCATGGAAGTAAAGAACTGTCAACTGAGGCCAAGAGA 2160
Qy 2161 GTACACAAACCAATTAAGACAAAGTAAAGACATGACAGTGAATCTTCCAGAGCTGA 2220
Dd 2161 GTACACAAACCAATTAAGACAAAGTAAAGACATGACAGTGAATCTTCCAGAGCTGA 2220
Qy 2221 AGTTAAACAAATGACACCTGTTCTTTACTAAGTGTTCACAAATACAGTGAATTAAGAAAT 2280
Dd 2221 AGTTAAACAAATGACACCTGTTCTTTACTAAGTGTTCACAAATACAGTGAATTAAGAAAT 2280
Qy 2281 TTGTCAATCTAGCTTCCAGAGAAAGAAAAAGAAAGAACTAGAAACAGTTAAAGTGT 2340
Dd 2281 TTGTCAATCTAGCTTCCAGAGAAAGAAAAAGAAAGAACTAGAAACAGTTAAAGTGT 2340
Qy 2341 CTATTAATGCTGAAGAGCCCAAAAGTCTCATGTTAATGTGAGAAAGGTTTCCAAACTG 2400
Dd 2341 CTATTAATGCTGAAGAGCCCAAAAGTCTCATGTTAATGTGAGAAAGGTTTCCAAACTG 2400
Qy 2401 AAAGATCTGTAGAGAGTGAAGTATTCATGATGAGTGAAGTGAATGATGAGCACTCAGG 2460
Dd 2401 AAAGATCTGTAGAGAGTGAAGTATTCATGATGAGTGAAGTGAATGATGAGCACTCAGG 2460

OY 2461 AAGATCTCGTTACTGAGTAGTACACTTAGGGAGCAAAAAACAGAACCAATAAT 2520
 |||||
 Db 2461 AAGATCTCGTTACTGAGTAGTACACTTAGGGAGCAAAAAACAGAACCAATAAT 2520
 |||||
 OY 2521 GTGTAGTCACTGTGCACCAATTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAAG 2580
 |||||
 Db 2521 GTGTAGTCACTGTGCACCAATTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAAG 2580
 |||||
 OY 2581 AATAAGAAATGACACAGAAAGGCTTAGTATCCATTGGGACATGAAAGTAAACCAAGTC 2640
 |||||
 Db 2581 AATAAGAAATGACACAGAAAGGCTTAGTATCCATTGGGACATGAAAGTAAACCAAGTC 2640
 |||||
 OY 2641 GGGAAACAAGCATAGAAATGGAAGAAAGTGAACCTGATGCTCAGATTTGAGAAATACAT 2700
 |||||
 Db 2641 GGGAAACAAGCATAGAAATGGAAGAAAGTGAACCTGATGCTCAGATTTGAGAAATACAT 2700
 |||||
 OY 2701 TCAGGTTTCAAAGGCCAGTCATTTGCTGTTTCAAATCCAGAAATCCAGAAAGG 2760
 |||||
 Db 2701 TCAGGTTTCAAAGGCCAGTCATTTGCTGTTTCAAATCCAGAAATCCAGAAAGG 2760
 |||||
 OY 2761 AATGCAACATCTCTGCCACTCTGGTCTTAAAGAAACCAAGTCCAAAGTCACCT 2820
 |||||
 Db 2761 AATGCAACATCTCTGCCACTCTGGTCTTAAAGAAACCAAGTCCAAAGTCACCT 2820
 |||||
 OY 2821 TTGAATGTGAACAAAGAGAGAAATCAAGAAAGATGAGTCTAATTCAGGCTGTAC 2880
 |||||
 Db 2821 TTGAATGTGAACAAAGAGAGAAATCAAGAAAGATGAGTCTAATTCAGGCTGTAC 2880
 |||||
 OY 2881 AGACAGTTAATATCATCTGCAGGCTTCTGTGTTGTGCAGAAAGATAGCCAGTTGATA 2940
 |||||
 Db 2881 AGACAGTTAATATCATCTGCAGGCTTCTGTGTTGTGCAGAAAGATAGCCAGTTGATA 2940
 |||||
 OY 2941 ATGCCAATGTAGTATCAAGAGAGGCTTAGGTTTGTCTATCATCTCAGTTCAGAGCA 3000
 |||||
 Db 2941 ATGCCAATGTAGTATCAAGAGAGGCTTAGGTTTGTCTATCATCTCAGTTCAGAGCA 3000
 |||||
 OY 3001 ACGAAACTGCACTATTACTCCAAATTAACATGAGACTTTTACAAAACCCATATGCTATAC 3060
 |||||
 Db 3001 ACGAAACTGCACTATTACTCCAAATTAACATGAGACTTTTACAAAACCCATATGCTATAC 3060
 |||||
 OY 3061 CACCACTTTTCCCATCAAGTCATTTGTTAAACTAAATGTAGAAAAATCTGCTAGAGG 3120
 |||||
 Db 3061 CACCACTTTTCCCATCAAGTCATTTGTTAAACTAAATGTAGAAAAATCTGCTAGAGG 3120
 |||||
 OY 3121 AAACTTGGAGAACATTCATGTCACCTGGAAGAGAAATGGAATGAGAAACATTCOA 3180
 |||||
 Db 3121 AAACTTGGAGAACATTCATGTCACCTGGAAGAGAAATGGAATGAGAAACATTCOA 3180
 |||||
 OY 3181 GTACAGTGAACAATTAAGCCGTATAATACATTAGAGAAATGTTTTTAAAGAGCCAGCT 3240
 |||||
 Db 3181 GTACAGTGAACAATTAAGCCGTATAATACATTAGAGAAATGTTTTTAAAGAGCCAGCT 3240
 |||||
 OY 3241 CAACCAATTAATTAAGAGTAGTTCAGTACTAATGAAGTGGCTCCAGTTTATGAAA 3300
 |||||
 Db 3241 CAACCAATTAATTAAGAGTAGTTCAGTACTAATGAAGTGGCTCCAGTTTATGAAA 3300
 |||||
 OY 3301 TAGGTCCAGTATGAAAACATTCAGAGAACTAGTGAAGAAACAGAGGCCAAATTTGA 3360
 |||||
 Db 3301 TAGGTCCAGTATGAAAACATTCAGAGAACTAGTGAAGAAACAGAGGCCAAATTTGA 3360
 |||||
 OY 3361 ATGCTATGCTTAGATTAAGGGTTTTCACACTGAGGCTATTAACAAAGTCTCTCTGAA 3420
 |||||
 Db 3361 ATGCTATGCTTAGATTAAGGGTTTTCACACTGAGGCTATTAACAAAGTCTCTCTGAA 3420
 |||||
 OY 3421 GTAATGTGAACATCCGAATTAATAAAGCAAGATATGAAGAGTAGTTCAGACTGTA 3480
 |||||
 Db 3421 GTAATGTGAACATCCGAATTAATAAAGCAAGATATGAAGAGTAGTTCAGACTGTA 3480
 |||||
 OY 3481 ATACAGATTCTCTCATATCTGATTTCAGATTAACCTTGAACAGACCTTATGGAAGTAGTC 3540
 |||||
 Db 3481 ATACAGATTCTCTCATATCTGATTTCAGATTAACCTTGAACAGACCTTATGGAAGTAGTC 3540
 |||||
 OY 3541 ATGCACTCAGGTTTGTTCGAGACACCTGATGACCTGTTAGATGATGTTAAAGG 3600
 |||||

Db 3541 ATGCACTCAGGTTTGTCTGAGACACCTGATGACCTGTTAGATGATGTTGTAATAAGG 3600
 |||||
 OY 3601 AAGATCTAGTTTGTCTGAAAAATGACATTAAGAAAGTTCTGCTTTTTTACAAACCG 3660
 |||||
 Db 3601 AAGATCTAGTTTGTCTGAAAAATGACATTAAGAAAGTTCTGCTTTTTTACAAACCG 3660
 |||||
 OY 3661 TCCAGAAAGAGAGTTTGCAGAGAGTCTACGCCCTTACACCATACATTTGGCTCAGG 3720
 |||||
 Db 3661 TCCAGAAAGAGAGTTTGCAGAGAGTCTACGCCCTTACACCATACATTTGGCTCAGG 3720
 |||||
 OY 3721 GTTACCGAAGAGGGGCCAAGAAATTAGATCCTCAGAGAGAACTTATCTAGAGATG 3780
 |||||
 Db 3721 GTTACCGAAGAGGGGCCAAGAAATTAGATCCTCAGAGAGAACTTATCTAGAGATG 3780
 |||||
 OY 3781 AAGACTTCCTGCTCTCCAAACATTTGTTTGGTAAAGTAAACAATTTACTCTCAGT 3840
 |||||
 Db 3781 AAGACTTCCTGCTCTCCAAACATTTGTTTGGTAAAGTAAACAATTTACTCTCAGT 3840
 |||||
 OY 3841 CTACTAGGCATAGCACCGTGTCTACCGAGTCTGTCTAAGAACACAGAGAGATTTAT 3900
 |||||
 Db 3841 CTACTAGGCATAGCACCGTGTCTACCGAGTCTGTCTAAGAACACAGAGAGATTTAT 3900
 |||||
 OY 3901 TATCATTAAGAAATAGCTTAATGATGCTGACGTAAACAGATATATTTGGCAAGCATCTC 3960
 |||||
 Db 3901 TATCATTAAGAAATAGCTTAATGATGCTGACGTAAACAGATATATTTGGCAAGCATCTC 3960
 |||||
 OY 3961 AGGAACATCACCTTAGTAGAGAAACAAATATTTCTGAGTGTGTTTCTTCCAGCTCA 4020
 |||||
 Db 3961 AGGAACATCACCTTAGTAGAGAAACAAATATTTCTGAGTGTGTTTCTTCCAGCTCA 4020
 |||||
 OY 4021 GTGATTTGAGAGACTTGCCTCAATTAACAAACCCAGATCCCTTCTGATGGTCTT 4080
 |||||
 Db 4021 GTGATTTGAGAGACTTGCCTCAATTAACAAACCCAGATCCCTTCTGATGGTCTT 4080
 |||||
 OY 4081 CCAAAACAATGAGGCATCAGTCTGAAGCCAGAGAGTGTCTGATGACAAAGAAATTGG 4140
 |||||
 Db 4081 CCAAAACAATGAGGCATCAGTCTGAAGCCAGAGAGTGTCTGATGACAAAGAAATTGG 4140
 |||||
 OY 4141 TTTCAATGATGAAGAAAGAGAAAGGCGCTTGGAAAGAAATATCAAAAGACAAACA 4200
 |||||
 Db 4141 TTTCAATGATGAAGAAAGAGAAAGGCGCTTGGAAAGAAATATCAAAAGACAAACA 4200
 |||||
 OY 4201 TGGATTCAACTTAGTGAACAGCATGTGGGTGAGAGTGAAGAAACAAGCTCTCTGAG 4260
 |||||
 Db 4201 TGGATTCAACTTAGTGAACAGCATGTGGGTGAGAGTGAAGAAACAAGCTCTCTGAG 4260
 |||||
 OY 4261 ACTGCTAGGGCTATCTCTCAGAGTGAACATTTTAAACCTCAGCAGAGAGATACATGC 4320
 |||||
 Db 4261 ACTGCTAGGGCTATCTCTCAGAGTGAACATTTTAAACCTCAGCAGAGAGATACATGC 4320
 |||||
 OY 4321 AACATTAACCTGATAAGCTCCAGAGAAATGGCTGAAGCTGATTAAGAACGC 4380
 |||||
 Db 4321 AACATTAACCTGATAAGCTCCAGAGAAATGGCTGAAGCTGATTAAGAACGC 4380
 |||||
 OY 4381 ATGGAGGCACGCTTCTTAACAGCTAACCTTCATCATTAAGTACTCTCTGAGG 4440
 |||||
 Db 4381 ATGGAGGCACGCTTCTTAACAGCTAACCTTCATCATTAAGTACTCTCTGAGG 4440
 |||||
 OY 4441 ACCTGCGAAATCCGAACAAAGCACATCAGAAAAAGCGATTTAACTTCAACAGAAAGTA 4500
 |||||
 Db 4441 ACCTGCGAAATCCGAACAAAGCACATCAGAAAAAGCGATTTAACTTCAACAGAAAGTA 4500
 |||||
 OY 4501 GTGAATACCCATTAAGCCAGAAATCAGAAAGGCTTTCGTCGACAAAGTTTGAAGTGTG 4560
 |||||
 Db 4501 GTGAATACCCATTAAGCCAGAAATCAGAAAGGCTTTCGTCGACAAAGTTTGAAGTGTG 4560
 |||||
 OY 4561 CAGATAGTTTACCAAGTAAATTAAGAACCCAGAGATGGAAGGTCATCCCTCTTAAT 4620
 |||||
 Db 4561 CAGATAGTTTACCAAGTAAATTAAGAACCCAGAGATGGAAGGTCATCCCTCTTAAT 4620
 |||||
 OY 4621 GCCCATCTTAATGATGATAGTGTGATCATGCAAGTGTGCTGGAGTCTTCAGAATAGAA 4680
 |||||


```

Db 4621 GCCCATCATAGATAGTGTGTACATGACAGTTGCTCTGGAGATCTTCCAGATAGAA 4680
QY 4681 ACTACCATCTCAGAGAGAGCTCATTAAAGTTGTTGATGTGGAGGAGCAACAGCTGGAG 4740
Db 4681 ACTACCATCTCAGAGAGAGCTCATTAAAGTTGTTGATGTGGAGGAGCAACAGCTGGAG 4740
QY 4741 AGTGGGCGCACAGCATTTGACGGAAACATCTTACTTGGCAAGGCAAGATCTAGAGGAA 4800
Db 4741 AGTGGGCGCACAGCATTTGACGGAAACATCTTACTTGGCAAGGCAAGATCTAGAGGAA 4800
QY 4801 CCCCTTACTGGAATCTGGAATCAGCTCTTCTGATGACCTGTAATCTGATCTCTTG 4860
Db 4801 CCCCTTACTGGAATCTGGAATCAGCTCTTCTGATGACCTGTAATCTGATCTCTTG 4860
QY 4861 AAGACAGAGCCCGACAGTCTGTTGGCAACATACATCTTCAACCTCGATTTGA 4920
Db 4861 AAGACAGAGCCCGACAGTCTGTTGGCAACATACATCTTCAACCTCGATTTGA 4920
QY 4921 AAGTCCCAATGGAAGTTGCGAATCTGCCAGAGTCCAGCTGCTGCTCATACTG 4980
Db 4921 AAGTCCCAATGGAAGTTGCGAATCTGCCAGAGTCCAGCTGCTGCTCATACTG 4980
QY 4981 ATACTGCTGGGTATATGCAATGGAAGAAAGTGTGAGCAGGAGAGAACCTAGATGACAG 5040
Db 4981 ATACTGCTGGGTATATGCAATGGAAGAAAGTGTGAGCAGGAGAGAACCTAGATGACAG 5040
QY 5041 CTTCACAGAAAAGGTCACAAAAGAAATGTCATGCTGCTGAGCCCTGAGCCCGAGAG 5100
Db 5041 CTTCACAGAAAAGGTCACAAAAGAAATGTCATGCTGCTGAGCCCTGAGCCCGAGAG 5100
QY 5101 AATTTAGCTGCTGACAGTTTGGCAGAAAACACATCTTAACTTAATTA 5160
Db 5101 AATTTAGCTGCTGACAGTTTGGCAGAAAACACATCTTAACTTAATTA 5160
QY 5161 CTGAGAGAGTACTGCTATGTTGTAAGAAACAGATGCTGAGTTGTGTGAGGAGAC 5220
Db 5161 CTGAGAGAGTACTGCTATGTTGTAAGAAACAGATGCTGAGTTGTGTGAGGAGAC 5220
QY 5221 TGAATATTTTCTAGGAATGCGGGAGGAAAATGGTATGATTTCTGGTGACCC 5280
Db 5221 TGAATATTTTCTAGGAATGCGGGAGGAAAATGGTATGATTTCTGGTGACCC 5280
QY 5281 AGCTATTTAAAGAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAGATGTGG 5340
Db 5281 AGCTATTTAAAGAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAGATGTGG 5340
QY 5341 TCAATGGAAGAAACCAAGGTCACAAAGCGAGAGAGAAATCCAGAGACAGAAAGATCT 5400
Db 5341 TCAATGGAAGAAACCAAGGTCACAAAGCGAGAGAGAAATCCAGAGACAGAAAGATCT 5400
QY 5401 TCAGGGGGCTAGAAATCTGTGCTATGAGGCCCTTCACCAACATGCCCACAGATCAACTGG 5460
Db 5401 TCAGGGGGCTAGAAATCTGTGCTATGAGGCCCTTCACCAACATGCCCACAGATCAACTGG 5460
QY 5461 AATGATGATGACAGTGTGTGCTTGTGTGAGAGAGAGTTCATCATTTACACCTTG 5520
Db 5461 AATGATGATGACAGTGTGTGCTTGTGTGAGAGAGAGTTCATCATTTACACCTTG 5520
QY 5521 GCACAGGTGTCACCAATGTTGGTTGTCAGGCCGATGCTGGGACAGAGCAATGCT 5580
Db 5521 GCACAGGTGTCACCAATGTTGGTTGTCAGGCCGATGCTGGGACAGAGCAATGCT 5580
QY 5581 TCCATGCAATGGGCGAGATGTGTGAGGCACTGTGTGATACCCGAGAGGCGGTGGACA 5640
Db 5581 TCCATGCAATGGGCGAGATGTGTGAGGCACTGTGTGATACCCGAGAGGCGGTGGACA 5640
QY 5641 GTGTAGACACTCTACAGAGTCCAGAGAGTGTGACACCTGATACCCAGATCCCCACA 5700
Db 5641 GTGTAGACACTCTACAGAGTCCAGAGAGTGTGACACCTGATACCCAGATCCCCACA 5700
QY 5701 GCCACTACTGA 5711
Db 5701 GCCACTACTGA 5711

```

```

RESULT 11
US-08-487-002-1
; Sequence 1, Application US/08487002
; Patent No. 5710001
; GENERAL INFORMATION:
; APPLICANT: Shattuck-Eidens, Donna M.
; APPLICANT: Simard, Jacques
; APPLICANT: Eml, Mitsuru
; APPLICANT: Nakamura, Yusuke
; APPLICANT: Duracher, Francine
; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
; NUMBER OF SEQUENCES: 85
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
; STREET: 1201 New York Avenue, N.W., Suite 1000
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/487,002
; FILING DATE:
; CLASSIFICATION: 424
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/409,305
; FILING DATE: 24-MAR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/348,824
; FILING DATE: 29-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/308,104
; FILING DATE: 16-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/300,266
; FILING DATE: 02-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/289,221
; FILING DATE: 12-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Immen, Jeffrey L.
; REGISTRATION NUMBER: 28,957
; REFERENCE/DOCKET NUMBER: 24884-109347
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-962-4810
; TELEFAX: 202-962-8300
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 5914 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 120..5711
; US-08-487-002-1

```

```

Query Match          99.98; Score 5707.8; DB 1; Length 5914;
Best Local Similarity 100.08; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

QY	1	AGCTGCGTAGACATCTCCGAGACCCCGACACGAGCGCTGCGGGCTTCTCAGATAACTCGGCC	60
Db	1	AGCTGCGTAGACATCTCCGAGACCCCGACACGAGCGCTGCGGGCTTCTCAGATAACTCGGCC	60
QY	61	CTCTCGCGTCAGAGAGCGCTTCAACCTCTGCTCTGGGGTAAAGTTCATTGGACAGAGAA	120
Db	61	CTCTCGCGTCAGAGAGCGCTTCAACCTCTGCTCTGGGGTAAAGTTCATTGGACAGAGAA	120
QY	121	TGGATTTATCTGCTCTTCCGCTGAGAGAGTACAAATGTCAATTAACTATATGACAGAAA	180
Db	121	TGGATTTATCTGCTCTTCCGCTGAGAGAGTACAAATGTCAATTAACTATATGACAGAAA	180
QY	181	TCTTAGAGTGCCCATCTGCTGCTGGAGTGTGACAAAGAACCTGTCTCCCAAAAGTGTACC	240
Db	181	TCTTAGAGTGCCCATCTGCTGCTGGAGTGTGACAAAGAACCTGTCTCCCAAAAGTGTACC	240
QY	241	ACATATTTTGGAAATTTTGCATGCGTGAATCTTCAACCAAGAGAAAGGCGCTTCAACGT	300
Db	241	ACATATTTTGGAAATTTTGCATGCGTGAATCTTCAACCAAGAGAGGCGCTTCAACGT	300
QY	301	GTCTTTATGTAGAAATGTATTAACAAAAGAGCGCTACAGAAAGTACGAGATTTTACTC	360
Db	301	GTCTTTATGTAGAAATGTATTAACAAAAGAGCGCTACAGAAAGTACGAGATTTTACTC	360
QY	361	AACCTGTGGAAGACTATGTGAATTCATTTTGCTTTACGCTTGACACAGCTTTGGAGT	420
Db	361	AACCTGTGGAAGACTATGTGAATTCATTTTGCTTTACGCTTGACACAGCTTTGGAGT	420
QY	421	ATGCAAAACAGCTATTAATTTTGCAAAAGAGAAATTAACCTCGCGAACATGTAAAGATG	480
Db	421	ATGCAAAACAGCTATTAATTTTGCAAAAGAGAAATTAACCTCGCGAACATGTAAAGATG	480
QY	481	AAGTTTCTATCATCCAAAGTATGGGCTACAGAAAACCGTCCCAAAAGACTTCTACAGATG	540
Db	481	AAGTTTCTATCATCCAAAGTATGGGCTACAGAAAACCGTCCCAAAAGACTTCTACAGATG	540
QY	541	AAACCGGAAATTCCTCTCTGAGAGAAACCACTCACTGCTCAACTCTCTAACCTTGGAA	600
Db	541	AAACCGGAAATTCCTCTCTGAGAGAAACCACTCACTGCTCAACTCTCTAACCTTGGAA	600
QY	601	CTGTGAAACACTCTGAGAGCAAAAGCAGGGATACAACTCTCAAAACAGCTCTTACATTTG	660
Db	601	CTGTGAAACACTCTGAGAGCAAAAGCAGGGATACAACTCTCAAAACAGCTCTTACATTTG	660
QY	661	AATTGGGATCTGATCTCTTGTGAAGATACCGTTAATAAGCAACTTATTGCAGTGTGGAG	720
Db	661	AATTGGGATCTGATCTCTTGTGAAGATACCGTTAATAAGCAACTTATTGCAGTGTGGAG	720
QY	721	ATCAAGAATTTGTACAAATCACCCCTCAAGGACACGAGGATGAATATCAGTTGGATTCTG	780
Db	721	ATCAAGAATTTGTACAAATCACCCCTCAAGGACACGAGGATGAATATCAGTTGGATTCTG	780
QY	781	CAAAAAGGCGCTGTGGAATTTCTGAGAGGATGAACAAATACGAAATCATCATCAC	840
Db	781	CAAAAAGGCGCTGTGGAATTTCTGAGAGGATGAACAAATACGAAATCATCATCAC	840
QY	841	CCACTAATTAATGATTTGAACACCACTAGAGAGCTGACGTGAGAGGCGATCCAAAAAGT	900
Db	841	CCACTAATTAATGATTTGAACACCACTAGAGAGCTGACGTGAGAGGCGATCCAAAAAGT	900
QY	901	ATCAGGGTAGTCTGTTCAAATCTTGATGATGAGCAATGTGGACCAAAATCTCATGCCA	960
Db	901	ATCAGGGTAGTCTGTTCAAATCTTGATGATGAGCAATGTGGACCAAAATCTCATGCCA	960
QY	961	GCCTATTAACGAGATGAGAACAGAGCTTTATTACTACTAAGAGAGATGAATGTAGAAA	1020
Db	961	GCCTATTAACGAGATGAGAACAGAGCTTTATTACTACTAAGAGAGATGAATGTAGAAA	1020
QY	1021	AGGCTGAATTCCTGTAATTAAGCAAAAGCCTGGCTTACGAAAGAGCAACATATAACAT	1080
Db	1021	AGGCTGAATTCCTGTAATTAAGCAAAAGCCTGGCTTACGAAAGAGCAACATATAACAT	1080
QY	1081	GGGCTGGAAGTAAAGAAACATGTATATATAGGCGGACTCCAGCACAGAAAAAGGTG	1140

Db	1081	GGGCTGGAGTGAAGAAACATGTATGTATAGCGGACTCCAGCACAAAAAAGGTAG	1140
QY	1141	ATCTGAAGCTGATCCCTGTGTGAGAAAAAAGATGGAATAGCAGAACTGCCATCT	1200
Db	1141	ATCTGAAGCTGATCCCTGTGTGAGAAAAAAGATGGAATAGCAGAACTGCCATCT	1200
QY	1201	CAGAGAACTCTAGAGATCTGAGAGATGTTCTTGATATACCTAATAGCAGATTCGA	1260
Db	1201	CAGAGAACTCTAGAGATCTGAGAGATGTTCTTGATATACCTAATAGCAGATTCGA	1260
QY	1261	AAGTAAATGAGGGTTTCCAGAGTGTAGACGTTAGTGTTGTGATGATACACATGATG	1320
Db	1261	AAGTAAATGAGGGTTTCCAGAGTGTAGACGTTAGTGTTGTGATGATACACATGATG	1320
QY	1321	GGGAGTCTGAATCAAAATCCCAAAGAGCTGATGTATTGGAGCTTCTAATAGTAGATG	1380
Db	1321	GGGAGTCTGAATCAAAATCCCAAAGAGCTGATGTATTGGAGCTTCTAATAGTAGATG	1380
QY	1381	AATATTTGCTTCTCAGAGAAATAGACTTACTGGCCAGTACGTCATGAGGCTTTAA	1440
Db	1381	AATATTTGCTTCTCAGAGAAATAGACTTACTGGCCAGTACGTCATGAGGCTTTAA	1440
QY	1441	TATGTAAAGTGAAGAGTTTCACTCCCAATCAGTGNAGATTAATTTGAACACAAATAT	1500
Db	1441	TATGTAAAGTGAAGAGTTTCACTCCCAATCAGTGNAGATTAATTTGAACACAAATAT	1500
QY	1501	TTGGGAAACCTATGCGAAGAGGCAAGCCTCCCAACTTAAAGCATGTAACTGAAATC	1560
Db	1501	TTGGGAAACCTATGCGAAGAGGCAAGCCTCCCAACTTAAAGCATGTAACTGAAATC	1560
QY	1561	TAATTAATGAGACATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCAAAATYA	1620
Db	1561	TAATTAATGAGACATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCAAAATYA	1620
QY	1621	AATTAACCGTAAAGAGAGACCTTCATAGGCGTTCACGAGGATTTTATCAAGAAAG	1680
Db	1621	AATTAACCGTAAAGAGAGACCTTCATAGGCGTTCACGAGGATTTTATCAAGAAAG	1680
QY	1681	CAGATTTGGCAGTTCCAAAAGACCTCCGTAATATGATTAATCAGAGAACTAAACAAAGGAGC	1740
Db	1681	CAGATTTGGCAGTTCCAAAAGACCTCCGTAATATGATTAATCAGAGAACTAAACAAAGGAGC	1740
QY	1741	AGATGTGCAAGTGTGAATATTACTAATAGTGTCTATGAGAGATTAACAAAGGTGATTT	1800
Db	1741	AGATGTGCAAGTGTGAATATTACTAATAGTGTCTATGAGAGATTAACAAAGGTGATTT	1800
QY	1801	CTATTCAAAATGAGAAAAATCCTTAACCAATAGATTCCTGAAAAAATACTGCTTTCA	1860
Db	1801	CTATTCAAAATGAGAAAAATCCTTAACCAATAGATTCCTGAAAAAATACTGCTTTCA	1860
QY	1861	AAAGCAAGCTGAAGCCTTAAGCAGCAGCATTAAGCAATATGAACTCAATTAATATCC	1920
Db	1861	AAAGCAAGCTGAAGCCTTAAGCAGCAGCATTAAGCAATATGAACTCAATTAATATCC	1920
QY	1921	ACAAATTCAAAAGCACTTAAAAAGATAGGCTGAGAGAGGAAGTCTTCTACAGCATATTC	1980
Db	1921	ACAAATTCAAAAGCACTTAAAAAGATAGGCTGAGAGAGGAAGTCTTCTACAGCATATTC	1980
QY	1981	ATGGCGTTGAAGTACTAGTGAATCTTAAGCCCACTAATTTGTAAGTAATTCGAAA	2040
Db	1981	ATGGCGTTGAAGTACTAGTGAATCTTAAGCCCACTAATTTGTAAGTAATTCGAAA	2040
QY	2041	TTGATAGTGTCTTACGAGTGAAGAGATTAAGAAAAAAGTACAAACCAATATGCGACGCA	2100
Db	2041	TTGATAGTGTCTTACGAGTGAAGAGATTAAGAAAAAAGTACAAACCAATATGCGACGCA	2100
QY	2101	GGCAGCAGCAGAACTCTACAACTCAATGGAAGTAAAGAACTGCAACTGAGAGCCAAAGAGA	2160
Db	2101	GGCAGCAGCAGAACTCTACAACTCAATGGAAGTAAAGAACTGCAACTGAGAGCCAAAGAGA	2160
QY	2161	GTAACCAAGCAATGAACAGCAAGTAAAGACATGACAGTACTTTCCCAAGAGCTGA	2220
Db	2161	GTAACCAAGCAATGAACAGCAAGTAAAGACATGACAGTACTTTCCCAAGAGCTGA	2220

Dh 2161 GTAAACAGCCAAATGAAACAGACAGTAAAAAGACATGACAGCATCTTTCCAGAGCTGA 2220
Qy 2221 AGTTAACAAATGCACCTGGTCTTCTTACTAGTGTCAATATACAGTGAACCTTAAGAAAT 2280
Dh 2221 AGTTAACAAATGCACCTGGTCTTCTTACTAGTGTCAATATACAGTGAACCTTAAGAAAT 2280
Qy 2281 TTGTCAATCTAGCCTTCCAGAGAGAGAAAAAGAGAGAACTAGAAACAGTTAAAGTGT 2340
Dh 2281 TTGTCAATCTAGCCTTCCAGAGAGAGAAAAAGAGAGAACTAGAAACAGTTAAAGTGT 2340
Qy 2341 CTAATTAATGCTGAAGAACCCCAAGATCTCATGTGAAGTGAGAGAAAGGTTTGGCAACAG 2400
Dh 2341 CTAATTAATGCTGAAGAACCCCAAGATCTCATGTGAAGTGAGAGAAAGGTTTGGCAACAG 2400
Qy 2401 AAAGATCTGTAGAGAGTACACTATTTCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTG 2460
Dh 2401 AAAGATCTGTAGAGAGTACACTATTTCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTG 2460
Qy 2461 AAAGATCTGTAGAGAGTACACTATTTCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTG 2520
Dh 2461 AAAGATCTGTAGAGAGTACACTATTTCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTG 2520
Qy 2521 GTGTAGTGTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGT 2580
Dh 2521 GTGTAGTGTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGTGTGCTAGT 2580
Qy 2581 ATAAATAGAAATGACACAGAGAGGCTTTAAGTATCATCTGGAGATGAGTAAACACAGTGC 2640
Dh 2581 ATAAATAGAAATGACACAGAGAGGCTTTAAGTATCATCTGGAGATGAGTAAACACAGTGC 2640
Qy 2641 GGGAAACAGATATGAATGGAAGAAAGTGAAGCTTGATGCTGATTTTGGCAAGATCAAT 2700
Dh 2641 GGGAAACAGATATGAATGGAAGAAAGTGAAGCTTGATGCTGATTTTGGCAAGATCAAT 2700
Qy 2701 TCAAGTGTTCAAAGGGCCAGTATTTGCTGCTGCTTTCATCAATCCAGAAATGAGAGAGAG 2760
Dh 2701 TCAAGTGTTCAAAGGGCCAGTATTTGCTGCTGCTTTCATCAATCCAGAAATGAGAGAGAG 2760
Qy 2761 AATGTGCAACATCTCTGCCCACTCTGGGCTCTTAAAGAACCAAGTCCAAAAGTCACTT 2820
Dh 2761 AATGTGCAACATCTCTGCCCACTCTGGGCTCTTAAAGAACCAAGTCCAAAAGTCACTT 2820
Qy 2821 TTGAATGTGAACAAAGAGAGAAATCAAGAGAAAGATGATCTAATATCAAGCCTGTATC 2880
Dh 2821 TTGAATGTGAACAAAGAGAGAAATCAAGAGAAAGATGATCTAATATCAAGCCTGTATC 2880
Qy 2881 AGACAGTAAATATCACTGAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2940
Dh 2881 AGACAGTAAATATCACTGAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2940
Qy 2941 ATGCCAAATGTATATCAAGAGAGGCTTAGGTTTGTCTATCATCTCAAGTTCAGAGGCA 3000
Dh 2941 ATGCCAAATGTATATCAAGAGAGGCTTAGGTTTGTCTATCATCTCAAGTTCAGAGGCA 3000
Qy 3001 AGGAAACGAGACTCTTACTCTCAATTAACATGAGCTTTTCAAAAACCATATCTGATATC 3060
Dh 3001 AGGAAACGAGACTCTTACTCTCAATTAACATGAGCTTTTCAAAAACCATATCTGATATC 3060
Qy 3061 CACACATTTTCCCATCAAGTCAATTTGTTAAACATTAATGTAAGAAAAATCTGCTAGAGG 3120
Dh 3061 CACACATTTTCCCATCAAGTCAATTTGTTAAACATTAATGTAAGAAAAATCTGCTAGAGG 3120
Qy 3121 AAAAATTTGAGAGACATTCATGCTCACTGAAAGAGAAATGGAATGGAATGGAATGGAAT 3180
Dh 3121 AAAAATTTGAGAGACATTCATGCTCACTGAAAGAGAAATGGAATGGAATGGAATGGAAT 3180
Qy 3181 GTACAGTGAGACAAATAGCGGTATTAACATTAAGAGAAATGTTTAAAGAGAGCAGCT 3240
Dh 3181 GTACAGTGAGACAAATAGCGGTATTAACATTAAGAGAAATGTTTAAAGAGAGCAGCT 3240
Qy 3241 CAACCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGAAA 3300
Dh 3241 CAACCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGAAA 3300

Qy 3301 TAGGTTCCAGTATGAAAAACATTCAGAGAGAACTAGTAGAAACAGAGGCCCCAAATTTGA 3360
Dh 3301 TAGGTTCCAGTATGAAAAACATTCAGAGAGAACTAGTAGAAACAGAGGCCCCAAATTTGA 3360
Qy 3361 ATGCTATGCTTATGATTTAGGAGGTTTGGCAACCTGAGGCTATTAACAAAGTCTCTGGAA 3420
Dh 3361 ATGCTATGCTTATGATTTAGGAGGTTTGGCAACCTGAGGCTATTAACAAAGTCTCTGGAA 3420
Qy 3421 GTAAATGTAGATCTGAAATTAAGAAAGCAAGATTAAGAAAGTGTAGTGTAGTGTAGTGT 3480
Dh 3421 GTAAATGTAGATCTGAAATTAAGAAAGCAAGATTAAGAAAGTGTAGTGTAGTGTAGTGT 3480
Qy 3481 ATACAGATTTCTCTCCATATCTGATTTGATTAAGATTAAGATTAAGATTAAGATTAAG 3540
Dh 3481 ATACAGATTTCTCTCCATATCTGATTTGATTAAGATTAAGATTAAGATTAAGATTAAG 3540
Qy 3541 ATGCTATGCTTATGATTTAGGAGGTTTGGCAACCTGAGGCTATTAACAAAGTCTCTGGAA 3600
Dh 3541 ATGCTATGCTTATGATTTAGGAGGTTTGGCAACCTGAGGCTATTAACAAAGTCTCTGGAA 3600
Qy 3601 AAGATATGATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 3660
Dh 3601 AAGATATGATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 3660
Qy 3661 TCCAGAAAGAGAGCTTAGCAGAGTCTAGCCTTTCACCATATACATTTGGCTCAGG 3720
Dh 3661 TCCAGAAAGAGAGCTTAGCAGAGTCTAGCCTTTCACCATATACATTTGGCTCAGG 3720
Qy 3721 GTTACCAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 3780
Dh 3721 GTTACCAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG 3780
Qy 3781 AAGAGCTTCCCTGCTCCCAACCTGTTATTTGGAAGTAAACAAATATACCTCTCAGT 3840
Dh 3781 AAGAGCTTCCCTGCTCCCAACCTGTTATTTGGAAGTAAACAAATATACCTCTCAGT 3840
Qy 3841 CTACTAGGATATGACACCGCTTGTACAGAGTGTCTGTGAAGACACAGAGAGAAATTTAT 3900
Dh 3841 CTACTAGGATATGACACCGCTTGTACAGAGTGTCTGTGAAGACACAGAGAGAAATTTAT 3900
Qy 3901 TATCAATGAAGATATGCTTAAATGATCTGATTAACAGAGGAGGAGGAGGAGGAGGAGG 3960
Dh 3901 TATCAATGAAGATATGCTTAAATGATCTGATTAACAGAGGAGGAGGAGGAGGAGGAGG 3960
Qy 3961 AGGAACATCACCTTAGTGAAGAAACAAATATGCTGATGCTGCTGCTGCTGCTGCTGCTG 4020
Dh 3961 AGGAACATCACCTTAGTGAAGAAACAAATATGCTGATGCTGCTGCTGCTGCTGCTGCTG 4020
Qy 4021 GTGAATTTGGAAGACTGTGCTCAATTAACAAACACAGAGATCTTTGTTGATGTTGCTT 4080
Dh 4021 GTGAATTTGGAAGACTGTGCTCAATTAACAAACACAGAGATCTTTGTTGATGTTGCTT 4080
Qy 4081 CCAAAACAAATAGGAGATGATGCTGAAACCCAGAGGAGTGTGCTGAGAGAGAGAGAAATGG 4140
Dh 4081 CCAAAACAAATAGGAGATGATGCTGAAACCCAGAGGAGTGTGCTGAGAGAGAGAGAAATGG 4140
Qy 4141 TTTAGATGATGAAGAAAGAGAGAGGAGGCTTGAAGAAATTAATCAAGAGAGCAAGCA 4200
Dh 4141 TTTAGATGATGAAGAAAGAGAGAGGAGGCTTGAAGAAATTAATCAAGAGAGCAAGCA 4200
Qy 4201 TGGATTTCAAACTTAGGTAAACACAGATCTGAGGAGTGAAGAGAGAGAGAGAGAGAGAG 4260
Dh 4201 TGGATTTCAAACTTAGGTAAACACAGATCTGAGGAGTGAAGAGAGAGAGAGAGAGAGAG 4260
Qy 4261 ACTGCTCAGGAGTATCTCTCAGAGTGTGATTTAACACATCAGAGAGAGAGAGAGAGAG 4320
Dh 4261 ACTGCTCAGGAGTATCTCTCAGAGTGTGATTTAACACATCAGAGAGAGAGAGAGAGAG 4320
Qy 4321 AACATTAACCTGATTAAGCTCCAGAGAGAAATGCTGAAGTGAAGTGTGTTGAAGAGC 4380
Dh 4321 AACATTAACCTGATTAAGCTCCAGAGAGAAATGCTGAAGTGAAGTGTGTTGAAGAGC 4380

OY	4381	ATGGAGACACCTTCTTAACAGCTACCTTCATCATTAAGGAGCTCTTCGCCCTTGAGG	4440
Db	4381	ATGGAGACACCTTCTTAACAGCTACCTTCATCATTAAGGAGCTCTTCGCCCTTGAGG	4440
OY	4441	ACCTGCGAAATCCAGAAACAAAGACATCAGAAAAAGCAGTATTAACCTCACAGAAAGTA	4500
Db	4441	ACCTGCGAAATCCAGAAACAAAGACATCAGAAAAAGCAGTATTAACCTCACAGAAAGTA	4500
OY	4501	GTGAATACCTTAATAAGCCAGAAATCCAGAGCCCTTCTGCTGACAGTTTGAGGTGCTG	4560
Db	4501	GTGAATACCTCTTAAGCCAGAAATCCAGAGCCCTTCTGCTGACAGTTTGAGGTGCTG	4560
OY	4561	CAGATGAGTTCACAGTAAAAATTAAGAACCCAGAGGTGGAAGGCAATCCCTCTTAAT	4620
Db	4561	CAGATGAGTTCACAGTAAAAATTAAGAACCCAGAGGTGGAAGGCAATCCCTCTTAAT	4620
OY	4621	GCCCATCATTAAGATGATAGTGTGTACACAGCAGTGTGCTGCGGAGTCTTCAGATAGAA	4680
Db	4621	GCCCATCATTAAGATGATAGTGTGTACACAGCAGTGTGCTGCGGAGTCTTCAGATAGAA	4680
OY	4681	ACTTACCATCTCAAGAGAGAGCTCATTAAGTTGTTGATGTGAGAGACACAGCTGGAG	4740
Db	4681	ACTACCCATCTCAAGAGAGAGCTCATTAAGTTGTTGATGTGAGAGAGCACAGCTGGAG	4740
OY	4741	AGTCGGGGCCACAGATTTGACGGAAACATCTTCTCCAAAGGCAACATCTAGGGGAA	4800
Db	4741	AGTCTGGGCCACAGATTTGACGGAAACATCTTCTCCAAAGGCAACATCTAGGGGAA	4800
OY	4801	CCCCCTACCTGGAAATCTGGAAATCAGCCCTCTCTCTGTGATGACCCCTGAAATCTGATCTG	4860
Db	4801	CCCCCTACCTGGAAATCTGGAAATCAGCCCTCTCTCTGTGATGACCCCTGAAATCTGATCTG	4860
OY	4861	AAGACAGAGCCCAAGAGTCACTGCTGTGTGGCAACATACATCTTCAACCTCTGCATTTGA	4920
Db	4861	AAGACAGAGCCCAAGAGTCACTGCTGTGTGGCAACATACATCTTCAACCTCTGCATTTGA	4920
OY	4921	AAGTTCCCAATTAAGAGTTCGCAAAATGTGCCAGAGTCCAGCTGCTGCTCATCTACTG	4980
Db	4921	AAGTTCCCAATTAAGAGTTCGCAAAATGTGCCAGAGTCCAGCTGCTGCTCATCTACTG	4980
OY	4981	ATATCTGCTGGGTATTAATGCAATGGAAGAAATGTGAGCAGAGGAGAAAGCCAGAAATTGACAG	5040
Db	4981	ATATCTGCTGGGTATTAATGCAATGGAAGAAATGTGAGCAGAGGAGAAAGCCAGAAATTGACAG	5040
OY	5041	CTTTCACAGAAAGGCTCAACAAAGAAATGTCATGTGTGCTGAGCCCTGACCCACAGAG	5100
Db	5041	CTTTCACAGAAAGGCTCAACAAAGAAATGTCATGTGTGCTGAGCCCTGACCCACAGAG	5100
OY	5101	AATTTATGCTGTGTACAAAGTTTGCCAGAAACACACATCTACTTAATCTTAATTA	5160
Db	5101	AATTTATGCTGTGTACAAAGTTTGCCAGAAACACACATCTACTTAATCTTAATTA	5160
OY	5161	CTGAAGAGACTACTCATGTGTGTATGAAAGACAGATGCTCGAATTTGTGTGTAAAGGAGAC	5220
Db	5161	CTGAAGAGACTACTCATGTGTGTATGAAAGACAGATGCTCGAATTTGTGTGTAAAGGAGAC	5220
OY	5221	TGAATATTTTTCTGGAATTCGCGGAGAGAAATGGTAGTAGCTATTTCTGGGAGACCC	5280
Db	5221	TGAATATTTTTCTGGAATTCGCGGAGAGAAATGGTAGTAGCTATTTCTGGGAGACCC	5280
OY	5281	AGTCTATTTAAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAAATGTGG	5340
Db	5281	AGTCTATTTAAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAAATGTGG	5340
OY	5341	TCATGTGAGAGAAACCCACCAAGGTCCAAAGCAGAGAAAGAAATCCAGAGCAAGAAAGATCT	5400
Db	5341	TCATGTGAGAGAAACCCACCAAGGTCCAAAGCAGAGAAAGAAATCCAGAGCAAGAAAGATCT	5400
OY	5401	TCAGGGGGGCTAAGAAATCTGTTGCTATGAGGCCCTTACCAACATGCCCCACATCAATCACTGG	5460
Db	5401	TCAGGGGGGCTAAGAAATCTGTTGCTATGAGGCCCTTACCAACATGCCCCACATCAATCACTGG	5460
OY	5461	AATGAGATGATACAGCTGTGTGTCTTCTGTGTGTGAAGAGCTTTCATCATCTACCCCTTG	5520

```

Db      5461 AATGATGTGACACTGTGTGTCTTCTGTGTGTGAAGAGCTTTCATTCACCTTG 5520
QY      5521 GCACAGGTGTCCACCCCAATTGTGTGTGTGTGCAGCCAGATGCTTGACAGAGACAAATGGCT 5580
Db      5521 GCACAGGTGTGTCCACCCCAATTGTGTGTGTGTGTGCAGCCAGATGCTTGACAGAGACAAATGGCT 5580
QY      5581 TCCATGCATTTGGGCAGATGTGTGTAGGCACCTGTGTGTGACCCCGAATGGGTGTGGACA 5640
Db      5581 TCCATGCATTTGGGCAGATGTGTGTAGGCACCTGTGTGTGACCCCGAATGGGTGTGGACA 5640
QY      5641 GTGAGACACTTACAGTGCAGAGAGAGTGGACACTTACCTGATATCCCAATCCCCCACA 5700
Db      5641 GTGAGACACTTACAGTGCAGAGAGAGTGGACACTTACCTGATATCCCAATCCCCCACA 5700
QY      5701 GCCACTACTGA 5711
Db      5701 GCCACTACTGA 5711

RESULT 12
US-08-483-554B-1
; Sequence 1, Application US/08483554B
; Patent No. 5747282
; GENERAL INFORMATION:
; APPLICANT: Skolnick, Mark H.
; APPLICANT: Goldgar, David E.
; APPLICANT: Miki, Yoshio
; APPLICANT: Swenson, Jeff
; APPLICANT: Kamb, Alexander
; APPLICANT: Harsman, Keith D.
; APPLICANT: Shattuck-Elidens, Donna M.
; APPLICANT: Tavliglan, Sean V.
; APPLICANT: Wiseman, Roger W.
; APPLICANT: Futreal, P. Andrew
; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
; TITLE OF INVENTION: Susceptibility Gene
; NUMBER OF SEQUENCES: 85
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
; STREET: 1201 New York Avenue, N.W., Suite 1000
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentln Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/483,554B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 514
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/409,305
; FILING DATE: 24-MAR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/348,824
; FILING DATE: 29-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/308,104
; FILING DATE: 16-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/300,266
; FILING DATE: 02-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/289,221
; FILING DATE: 12-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Ihnen, Jeffrey L.
; REGISTRATION NUMBER: 28,957
; REFERENCE/DOCKET NUMBER: 24884-109347

```

TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 120..5708
US-08-483-554B-1

Query Match 99.9%; Score 5707.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 AGCTCCGTGAGACTTCTTGAGACCCCGACACAGGCTGGGTTTCTCAGATPACTGGCC 60
DB 1 AGCTCCGTGAGACTTCTTGAGACCCCGACACAGGCTGGGTTTCTCAGATPACTGGCC 60
QY 61 CCTCGCTCAGGAGGCGCTTCACCCCTGCTGGGTAAGTTCATGAGACAGAAAGAA 120
DB 61 CCTCGCTCAGGAGGCGCTTCACCCCTGCTGGGTAAGTTCATGAGACAGAAAGAA 120
QY 121 TGAATTTATCTGCTCTTCCGCTGAGAGAGTACAAATGTCATTAACTGATGAGAAA 180
DB 121 TGAATTTATCTGCTCTTCCGCTGAGAGAGTACAAATGTCATTAACTGATGAGAAA 180
QY 181 TCTTAGAGTGTCCATCTGTGTGAGTTGATCAAGAAACCTGTCTCCCAAAAGTGTACC 240
DB 181 TCTTAGAGTGTCCATCTGTGTGAGTTGATCAAGAAACCTGTCTCCCAAAAGTGTACC 240
QY 241 ACATATTTTGAATTTTGCATGCTGAAACTTCTCAACCAAGAAAGAGGCTTCACAGT 300
DB 241 ACATATTTTGAATTTTGCATGCTGAAACTTCTCAACCAAGAAAGAGGCTTCACAGT 300
QY 301 GTCCTTTATGTAGAAATGATATTAACCAAAAGAGGCTTCACAAAGATGAGATTAGTC 360
DB 301 GTCCTTTATGTAGAAATGATATTAACCAAAAGAGGCTTCACAAAGATGAGATTAGTC 360
QY 361 AACTTGTGAAGAGCTATGTAATCAATTTGTGCTTTCACCTGACACAGGTTGGAGT 420
DB 361 AACTTGTGAAGAGCTATGTAATCAATTTGTGCTTTCACCTGACACAGGTTGGAGT 420
QY 421 ATGCAAAACAGCTATTAATTTTGCAGAAAAAGAAATTAATCTCTGCAACATCTAAAGATG 480
DB 421 ATGCAAAACAGCTATTAATTTTGCAGAAAAAGAAATTAATCTCTGCAACATCTAAAGATG 480
QY 481 AAGTTCTATCATCAACCAAGATGAGGCTACAGAAACCGTCCAAAGACTTCTACAGAGTG 540
DB 481 AAGTTCTATCATCAACCAAGATGAGGCTACAGAAACCGTCCAAAGACTTCTACAGAGTG 540
QY 541 AACCCGAAATCTCTCTGAGAGAAACAGTCTCAAGTCTCAACCTTGGAA 600
DB 541 AACCCGAAATCTCTCTGAGAGAAACAGTCTCAAGTCTCAACCTTGGAA 600
QY 601 CTGTGAGAACTCTGAGAGCAAGCAGGATACAAACCTCAAAAGCGTCTCTACATG 660
DB 601 CTGTGAGAACTCTGAGAGCAAGCAGGATACAAACCTCAAAAGCGTCTCTACATG 660
QY 661 AATTGGATCTGATTTCTTGAGAGATCCGTTAATAAGGCACTTAATGACAGTGGAG 720
DB 661 AATTGGATCTGATTTCTTGAGAGATCCGTTAATAAGGCACTTAATGACAGTGGAG 720
QY 721 ATCAAGATTTGTAACAATCACCCCTCAAGAGACAGGATGAATCAGTTGGATTCTG 780
DB 721 ATCAAGATTTGTAACAATCACCCCTCAAGAGACAGGATGAATCAGTTGGATTCTG 780

DB 721 ATCAAGATTTGTAACAATCACCCCTCAAGAGACAGGATGAATCAGTTGGATTCTG 780
QY 781 CAAAAAGGCTGCTGGAATTTCTGACAGGATGTAACAATTAAGCAATCATCATAC 840
DB 781 CAAAAAGGCTGCTGGAATTTCTGACAGGATGTAACAATTAAGCAATCATCATAC 840
QY 841 CCAGTAATTAATGATTTGACACCACTGAGAGCGTGCAGGCTGAGAGCATCCAGAAAGT 900
DB 841 CCAGTAATTAATGATTTGACACCACTGAGAGCGTGCAGGCTGAGAGCATCCAGAAAGT 900
QY 901 ATCAGGATGTTGCTGTTTCAAACTTGCATGAGCCATGTGGCACAATTAATCATGCCA 960
DB 901 ATCAGGATGTTGCTGTTTCAAACTTGCATGAGCCATGTGGCACAATTAATCATGCCA 960
QY 961 GCTCATTAACAGCATGAGAACGAGATTATTAATCACTAAAGACAGATTAATGTAGAA 1020
DB 961 GCTCATTAACAGCATGAGAACGAGATTATTAATCACTAAAGACAGATTAATGTAGAA 1020
QY 1021 AGGCTGAATTTCTGTAATTAAGCAAGCCTGCTTAGCAGAGCCAAATTAAGAT 1080
DB 1021 AGGCTGAATTTCTGTAATTAAGCAAGCCTGCTTAGCAGAGCCAAATTAAGAT 1080
QY 1081 GGGCTGGAAGTAAAGAAACATGTAATGATAGGCGACTCCACAGACAGAAAAAGGTAG 1140
DB 1081 GGGCTGGAAGTAAAGAAACATGTAATGATAGGCGACTCCACAGACAGAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAGAACTGCCATGCT 1200
DB 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAGAACTGCCATGCT 1200
QY 1201 CAGAGAAATCTAGAGATACGAAAGATGTCCTTGATTAACGTAATTAAGCAGATTGAGA 1260
DB 1201 CAGAGAAATCTAGAGATACGAAAGATGTCCTTGATTAACGTAATTAAGCAGATTGAGA 1260
QY 1261 AAGTTAATGAGTGGTTTCCAGAGATGATGAACCTGTAGTCTGATGACTCAGATGATG 1320
DB 1261 AAGTTAATGAGTGGTTTCCAGAGATGATGAACCTGTAGTCTGATGACTCAGATGATG 1320
QY 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGATGATGATGAGAGCTTCTAAATGAGGTAGT 1380
DB 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGATGATGATGAGAGCTTCTAAATGAGGTAGT 1380
QY 1381 AATATTTCTGTTCTTCAGAGAAATTAAGCTTAAGTCTGAGTATCTCATGAGGCTTTAA 1440
DB 1381 AATATTTCTGTTCTTCAGAGAAATTAAGCTTAAGTCTGAGTATCTCATGAGGCTTTAA 1440
QY 1441 TATGTAAAGAGGAAAGGATTCACCAATCAGTAAGAGATTAATTTGAAGCAAAATAT 1500
DB 1441 TATGTAAAGAGGAAAGGATTCACCAATCAGTAAGAGATTAATTTGAAGCAAAATAT 1500
QY 1501 TTGGGAAACCTATCGAGAGAGCAAGCCTCCCAACTTAAGCCATGTAACCTGAATAATC 1560
DB 1501 TTGGGAAACCTATCGAGAGAGCAAGCCTCCCAACTTAAGCCATGTAACCTGAATAATC 1560
QY 1561 TAAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCACAAATA 1620
DB 1561 TAAATTAAGAGCAATTTGTTACTGAGCCACAGATTAATCAAGAGCGTCCCTCACAAATA 1620
QY 1621 AATTAAGCGTAAAGAGACCTACATCAGGCTTCACTCTGAGATTTATCAAGAAAG 1680
DB 1621 AATTAAGCGTAAAGAGACCTACATCAGGCTTCACTCTGAGATTTATCAAGAAAG 1680
QY 1681 CAGATTTGGCAGTTCAAAAGACCTCTGAATTAATCAAGGAGACTTAACCAAGGAGC 1740
DB 1681 CAGATTTGGCAGTTCAAAAGACCTCTGAATTAATCAAGGAGACTTAACCAAGGAGC 1740
QY 1741 AGAATGCTCAAGTATGATTAATTAATAGTGTGATGAGATTAACCAAGGAGAT 1800
DB 1741 AGAATGCTCAAGTATGATTAATTAATAGTGTGATGAGATTAACCAAGGAGAT 1800
QY 1801 CTATTCAGATGAGAAAAATCTTAACCAATTAATCACTCAGAAAAAGATCTGCTTTCA 1860
DB 1801 CTATTCAGATGAGAAAAATCTTAACCAATTAATCACTCAGAAAAAGATCTGCTTTCA 1860

1861 AAAGAAAGCTGAACCTATAGAGAGATATAGCAATATGGAACCTGCAATTAATTC 1920
1861 AAAGAAAGCTGAACCTATAGAGAGATATAGCAATATGGAACCTGCAATTAATTC 1920
1921 ACAATTCMAAGACCTTAAAGAAATAGGCTGAGAGAGAGCTTTCACAGCATATTC 1980
1921 ACAATTCMAAGACCTTAAAGAAATAGGCTGAGAGAGAGCTTTCACAGCATATTC 1980
1981 ATGCGCTTGAACTAGTAGTAGTAGAATCTAAAGCCCACTAATTTGACTGAATTCGAAA 2040
1981 ATGCGCTTGAACTAGTAGTAGTAGAATCTAAAGCCCACTAATTTGACTGAATTCGAAA 2040
2041 TTGATAGTTGTTCTAGACAGTGAAGAGATTAAGAAAAAATGCAACCAATGCGAGTCA 2100
2041 TTGATAGTTGTTCTAGACAGTGAAGAGATTAAGAAAAAATGCAACCAATGCGAGTCA 2100
2101 GGCACAGCAGAAAACCTACAACTCATGAGAGTAAAGAACCTGCAACTGAGCCAGAGAGA 2160
2101 GGCACAGCAGAAAACCTACAACTCATGAGAGTAAAGAACCTGCAACTGAGCCAGAGAGA 2160
2161 GTACACAGCCAAATGAAAGAGACAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
2161 GTACACAGCCAAATGAAAGAGACAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
2221 AGTTAACAAATGACACCTGTTCTTTTCTAAGTGTTCAAATACAGTGAACCTTAAAGAT 2280
2221 AGTTAACAAATGACACCTGTTCTTTTCTAAGTGTTCAAATACAGTGAACCTTAAAGAT 2280
2281 TTGTCAATCCTAGACCTTCCAGAGAGAGAAAAAGAGAAAGAACTAGAAACAGTTAAAGT 2340
2281 TTGTCAATCCTAGACCTTCCAGAGAGAGAAAAAGAGAAAGAACTAGAAACAGTTAAAGT 2340
2341 CTATATATGCTGAAGACCCCAAGATGCTCATGTTAACTGAGAAAGGCTTTGCAAACTG 2400
2341 CTATATATGCTGAAGACCCCAAGATGCTCATGTTAACTGAGAAAGGCTTTGCAAACTG 2400
2401 AAAGATCTGAGAGAGTAGAGATATTTCAATGGACCTGACTGATATGAGCAGTACAG 2460
2401 AAAGATCTGAGAGAGTAGAGATATTTCAATGGACCTGACTGATATGAGCAGTACAG 2460
2461 AAAGATCTGAGAGAGTAGAGATATTTCAATGGACCTGACTGATATGAGCAGTACAG 2520
2461 AAAGATCTGAGAGAGTAGAGATATTTCAATGGACCTGACTGATATGAGCAGTACAG 2520
2521 GTGTGAGTCTGCTGAGAGATTTGAAAAACCCCAAGGACATTAATTCATGTTGCCAAG 2580
2521 GTGTGAGTCTGCTGAGAGATTTGAAAAACCCCAAGGACATTAATTCATGTTGCCAAG 2580
2581 ATATATGAATGACACAGAGAGGCTTAAATGATCATTTGGAGACATGAAAGTTAACACAGTC 2640
2581 ATATATGAATGACACAGAGAGGCTTAAATGATCATTTGGAGACATGAAAGTTAACACAGTC 2640
2641 GGGAAACCAAGCATAGAAATGGAAGAAAGTGAACCTGATGCTCAGTATTTGCAGAAATACAT 2700
2641 GGGAAACCAAGCATAGAAATGGAAGAAAGTGAACCTGATGCTCAGTATTTGCAGAAATACAT 2700
2701 TCAGAGTTTCAAGCCGCACTCATTTGCTGTTTTCAAATCCAGGAAAGCAGAGAGG 2760
2701 TCAGAGTTTCAAGCCGCACTCATTTGCTGTTTTCAAATCCAGGAAAGCAGAGAGG 2760
2761 AATGTCAACATCTCTGCGCACTGCGGTCTTTAAAGAAACAAAGTCCAAAAGTCACTT 2820
2761 AATGTCAACATCTCTGCGCACTGCGGTCTTTAAAGAAACAAAGTCCAAAAGTCACTT 2820
2821 TTGAATGTGAACAAAAGAAATCAAGAAAGAAATGAGTCAATATATCAACCTGTAC 2880
2821 TTGAATGTGAACAAAAGAAATCAAGAAAGAAATGAGTCAATATATCAACCTGTAC 2880
2881 AGACATTTATATCATCTGAGGCTTCTGCTGTTGCTGAGAAAGATTAACCCAGTTGATA 2940
2881 AGACATTTATATCATCTGAGGCTTCTGCTGTTGCTGAGAAAGATTAACCCAGTTGATA 2940

2941 ATGCCAAATGATAGTCAAAAGAGAGCTCTAGGTTTGTCTATCATCTCAGTTCAGAGCA 3000
2941 ATGCCAAATGATAGTCAAAAGAGAGCTCTAGGTTTGTCTATCATCTCAGTTCAGAGCA 3000
3001 ACAGAACTGACTCATCTACTCTCAAAATTAACATGAGCTTTTACAAAACCATATCTATAC 3060
3001 ACAGAACTGACTCATCTACTCTCAAAATTAACATGAGCTTTTACAAAACCATATCTATAC 3060
3061 CACCACTTTTCCCATCAATCATTTGTTTAAACATTAATGAGAAAAATCTGCTAGAG 3120
3061 CACCACTTTTCCCATCAATCATTTGTTTAAACATTAATGAGAAAAATCTGCTAGAG 3120
3121 AAAAGCTTGGAGAACTTCAATGTCACCTGAAAAGAGAAAGGGAATGAGAACTTCCAA 3180
3121 AAAAGCTTGGAGAACTTCAATGTCACCTGAAAAGAGAAAGGGAATGAGAACTTCCAA 3180
3181 GTACAGTGACACAAATTAAGCCGTAATTAACATTAAGAGAAATGTTTTAAAGAACCTG 3240
3181 GTACAGTGACACAAATTAAGCCGTAATTAACATTAAGAGAAATGTTTTAAAGAACCTG 3240
3241 CAAGCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGATTAATGAAA 3300
3241 CAAGCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGATTAATGAAA 3300
3301 TAGGTTCCAGTATGAAGAAATTCACAGCAGAACTAGGTAGAAACAGAGGCGCAAAATGGA 3360
3301 TAGGTTCCAGTATGAAGAAATTCACAGCAGAACTAGGTAGAAACAGAGGCGCAAAATGGA 3360
3361 ATGCTATGCTTAGATTAAGGGGTTTGCACCTGAGGCTTAATTAACAAGCTTCTCTGAA 3420
3361 ATGCTATGCTTAGATTAAGGGGTTTGCACCTGAGGCTTAATTAACAAGCTTCTCTGAA 3420
3421 GTATATGAGCATCTCGAAATTAAGAAAGCAAGATTAAGAAAGTGTTCAGACTGTTA 3480
3421 GTATATGAGCATCTCGAAATTAAGAAAGCAAGATTAAGAAAGTGTTCAGACTGTTA 3480
3481 ATACAGATTTCTCTCATCTGATTCATGATTAATGATTAAGAAAGCTATGGAAGTGTGTC 3540
3481 ATACAGATTTCTCTCATCTGATTCATGATTAATGATTAAGAAAGCTATGGAAGTGTGTC 3540
3541 ATGCAATCTGAGGTTTGTCTGAGACACCTGATGACCTGTTAGATGATGTTGAATTAAGG 3600
3541 ATGCAATCTGAGGTTTGTCTGAGACACCTGATGACCTGTTAGATGATGTTGAATTAAGG 3600
3601 AAGATCTATTTTCTGCTGAAATTAAGCAATTAAGAAAGTGTCTGTTTAAAGAAAGCG 3660
3601 AAGATCTATTTTCTGCTGAAATTAAGCAATTAAGAAAGTGTCTGTTTAAAGAAAGCG 3660
3661 TCCAGAAAGAGAGCTTAGCAGAGAGTCTAGCCCTTACCCATACATTTGGCTCAGG 3720
3661 TCCAGAAAGAGAGCTTAGCAGAGAGTCTAGCCCTTACCCATACATTTGGCTCAGG 3720
3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGTGAAGATG 3780
3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGTGAAGATG 3780
3781 AAGAGCTTCCCTCTTCCAACTGTTTATTTGTTAAAGTAAACAAATATCTCTCAGT 3840
3781 AAGAGCTTCCCTCTTCCAACTGTTTATTTGTTAAAGTAAACAAATATCTCTCAGT 3840
3841 CTACTAGGCACTAGCAGCTGTTGCTAGCAGAGTCTGCTTAAGAAACACAGAGAAATTTAT 3900
3841 CTACTAGGCACTAGCAGCTGTTGCTAGCAGAGTCTGCTTAAGAAACACAGAGAAATTTAT 3900
3901 TATCATTTGAAGATTAATTAATGACTGCAATCAACAGGTAATATGCAAGGCAATCTC 3960
3901 TATCATTTGAAGATTAATTAATGACTGCAATCAACAGGTAATATGCAAGGCAATCTC 3960
3961 AGGAACATCACTTAATGAGAGAAACAAAGTCTCTAGCTTCTTCTACACATGCA 4020
3961 AGGAACATCACTTAATGAGAGAAACAAAGTCTCTAGCTTCTTCTACACATGCA 4020
4021 GTGAATTTGAAGACTGACGCAAAATTAACAACACCCAGAGATCTTCTTGAATGTTGTTT 4080

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,011B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs
TYPE: nucleic acid
STRADEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 120..5708
US-08-488-011B-1

Query Match 99.9%; Score 5707.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 AGCTGCTGAGACTTCTGTGAGACCCGACACAGGCTGTGGGTTTCTCAGATTAAGTGGCC 60
DB 1 AGCTGCTGAGACTTCTGTGAGACCCGACACAGGCTGTGGGTTTCTCAGATTAAGTGGCC 60
QY 61 CCTGCGCTCAGAGAGGCTTCAACCTCTGCTGTGGTAAAGTTCATTGGAAACAGAAAGAA 120
DB 61 CCTGCGCTCAGAGAGGCTTCAACCTCTGCTGTGGTAAAGTTCATTGGAAACAGAAAGAA 120
QY 121 TGAATTTATCTGCTTTCGCGTGAAGAGTACAAATGTCATTAATGTCAGAGAAA 180
DB 121 TGAATTTATCTGCTTTCGCGTGAAGAGTACAAATGTCATTAATGTCAGAGAAA 180
QY 181 TCTTAGAGTGTCCATCTGTCTGTGAGTTGATCAAGAAACCTGTCTCCACAAAGTGTACC 240
DB 181 TCTTAGAGTGTCCATCTGTCTGTGAGTTGATCAAGAAACCTGTCTCCACAAAGTGTACC 240
QY 241 ACATATTTGCAATTTTGTGATGCTGAACTTCTCAACCAAGAAAGGGGCTTCAAGT 300
DB 241 ACATATTTGCAATTTTGTGATGCTGAACTTCTCAACCAAGAAAGGGGCTTCAAGT 300
QY 301 GTCTTTATGTAAAGATATTAACCAAAAGAGCTTACAAAGAAAGTACGATTTAGTC 360
DB 301 GTCTTTATGTAAAGATATTAACCAAAAGAGCTTACAAAGAAAGTACGATTTAGTC 360
QY 361 AACTTTGTAAGAGCTTATGAAAATCATTTGTGCTTTTTCAGCTTGACACAGGTTTGGAGT 420
DB 361 AACTTTGTAAGAGCTTATGAAAATCATTTGTGCTTTTTCAGCTTGACACAGGTTTGGAGT 420

QY 421 ATGCAACAGCTATTAATTTGCCAAAAAGAAATTAATCTGCTGAACATCTAAAGATG 480
DB 421 ATGCAACAGCTATTAATTTGCCAAAAAGAAATTAATCTGCTGAACATCTAAAGATG 480
QY 481 AAGTTTCATCATCAAAAGTATGGGCTACAGAAACCGTCCAAAAGACTTTCAGAGATG 540
DB 481 AAGTTTCATCATCAAAAGTATGGGCTACAGAAACCGTCCAAAAGACTTTCAGAGATG 540
QY 541 AACCCGAAAATCCTTCTTGCAGAAACCAAGTCTCAGTGTCCAACTCTTAACCTTGGAA 600
DB 541 AACCCGAAAATCCTTCTTGCAGAAACCAAGTCTCAGTGTCCAACTCTTAACCTTGGAA 600
QY 601 CTGTGAGAACCTGTGAGAACAGAGAGGAGTACAAACCTCAAAAGACGCTCTCAACATG 660
DB 601 CTGTGAGAACCTGTGAGAACAGAGAGGAGTACAAACCTCAAAAGACGCTCTCAACATG 660
QY 661 AATTGGATCTGATTTCTGTAAGATACCGTTAATTAAGGCAACTTAATTCAGTGTGGAG 720
DB 661 AATTGGATCTGATTTCTGTAAGATACCGTTAATTAAGGCAACTTAATTCAGTGTGGAG 720
QY 721 ATCAAGAAATGTGTACAAATCACCCCTCAAGAACCCAGGATGAATCAGTTTGGATCTG 780
DB 721 ATCAAGAAATGTGTACAAATCACCCCTCAAGAACCCAGGATGAATCAGTTTGGATCTG 780
QY 781 CAAAAAGGCTGCTTGTGAATTTCTGAGACGGATGTACAAATACCTGAACATCATCAAC 840
DB 781 CAAAAAGGCTGCTTGTGAATTTCTGAGACGGATGTACAAATACCTGAACATCATCAAC 840
QY 841 CCAGTAATTAATGATTTGAACACCACTGAGAGAGCTGAGAGCATCAGAGCAATCAAGAT 900
DB 841 CCAGTAATTAATGATTTGAACACCACTGAGAGAGCTGAGAGCATCAGAGCAATCAAGAT 900
QY 901 ATCAGGGTATGTTCTGTTTCAAACTTGCATGTGAGAGCATGTGACAAATCTCATGCA 960
DB 901 ATCAGGGTATGTTCTGTTTCAAACTTGCATGTGAGAGCATGTGACAAATCTCATGCA 960
QY 961 GGCATTAACAGCATGAGAACGAGCTTATTAATCACTTAAGAGACAGAAATGATAGAA 1020
DB 961 GGCATTAACAGCATGAGAACGAGCTTATTAATCACTTAAGAGACAGAAATGATAGAA 1020
QY 1021 AGGCTGAATTTCTGTAATTAAGCAACAGCTGTGCTTACAGAGAGCCAAATCAAGAT 1080
DB 1021 AGGCTGAATTTCTGTAATTAAGCAACAGCTGTGCTTACAGAGAGCCAAATCAAGAT 1080
QY 1081 GGGCTGAGAGTAAAGAAACATGTATGATAGCGGACTCCACAGACAGAAAAAGGTAG 1140
DB 1081 GGGCTGAGAGTAAAGAAACATGTATGATAGCGGACTCCACAGACAGAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAACCAAACTGCCATGCT 1200
DB 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAACCAAACTGCCATGCT 1200
QY 1201 CAGAGAAATCTAGAGATTAAGATGTTCTTGTGATTAACCTTAATTAAGCAGATTGAGA 1260
DB 1201 CAGAGAAATCTAGAGATTAAGATGTTCTTGTGATTAACCTTAATTAAGCAGATTGAGA 1260
QY 1261 AAGTTAATGAGTGTTCAGAGAAAGTATGAAGTGTGAGTGTGATGACTCAGATGATG 1320
DB 1261 AAGTTAATGAGTGTTCAGAGAAAGTATGAAGTGTGAGTGTGATGACTCAGATGATG 1320
QY 1321 GGGAGTGTGAATCAAAAGGCCAAAGTACCTGATGATGATGAGCTTAAATGAGGTATAGT 1380
DB 1321 GGGAGTGTGAATCAAAAGGCCAAAGTACCTGATGATGATGAGCTTAAATGAGGTATAGT 1380
QY 1381 AATATCTGTTCTTTCAGAGAAATAGACTTACGTGCGCAGATGATCTCATAGGCTTTAA 1440
DB 1381 AATATCTGTTCTTTCAGAGAAATAGACTTACGTGCGCAGATGATCTCATAGGCTTTAA 1440
QY 1441 TATGTAAGAGTGAAGAGTTCCTCAATCAGTAGAGAGTAAATATTTGAAGACAAATAT 1500
DB 1441 TATGTAAGAGTGAAGAGTTCCTCAATCAGTAGAGAGTAAATATTTGAAGACAAATAT 1500

QY 1501 TTGGAAAACTATCGGAAGAAAGCAAGCCTCCCACTTAAGCCATGTAGTAATC 1560
Db 1501 TTGGAAAACTATCGGAAGAAAGCAAGCCTCCCACTTAAGCCATGTAGTAATC 1560
QY 1561 TAAATATAGGAGCATTTTGTACTGAGCCACAGATATACAGAGGTCCTCCACAAATA 1620
Db 1561 TAAATATAGGAGCATTTTGTACTGAGCCACAGATATACAGAGGTCCTCCACAAATA 1620
QY 1621 AATTAAGCGTAAAGAGACCTATCATGAGCCTTCATCTGAGATTTTATCAAGAAAG 1680
Db 1621 AATTAAGCGTAAAGAGACCTATCATGAGCCTTCATCTGAGATTTTATCAAGAAAG 1680
QY 1681 CAGATTGGCAGTTTAAAAAGACTCCTGAATGATTAATCAGGAATCAACAAAGGAGC 1740
Db 1681 CAGATTGGCAGTTTAAAAAGACTCCTGAATGATTAATCAGGAATCAACAAAGGAGC 1740
QY 1741 AGAATGTCAGTGTGATATATTAATAGTGTGATGAGATTAATAAAGAGGAT 1800
Db 1741 AGAATGTCAGTGTGATATATTAATAGTGTGATGAGATTAATAAAGAGGAT 1800
QY 1801 CTATTCAGAAATGAGAAAAATCCTAACCCATAGATCACTCGAAAAAGATCTGTTCA 1860
Db 1801 CTATTCAGAAATGAGAAAAATCCTAACCCATAGATCACTCGAAAAAGATCTGTTCA 1860
QY 1861 AAACGAAAGCTGAACCTTAAAGCAGCAGTATATAGCAATATGGAATCGAATTAATACC 1920
Db 1861 AAACGAAAGCTGAACCTTAAAGCAGCAGTATATAGCAATATGGAATCGAATTAATACC 1920
QY 1921 ACAATTCAAAAGCAGCTTAAAGAAATAGGCTGAGAGAGAGTCTCTCCAGCAGATTC 1980
Db 1921 ACAATTCAAAAGCAGCTTAAAGAAATAGGCTGAGAGAGAGTCTCTCCAGCAGATTC 1980
QY 1981 ATGCGCTTGAACCTAGTACTAGTAGAATCTTAAGCCACCTAATTTGACTGATTCGAAA 2040
Db 1981 ATGCGCTTGAACCTAGTACTAGTAGAATCTTAAGCCACCTAATTTGACTGATTCGAAA 2040
QY 2041 TTGTAGTGTGTTTACAGCAGTGAAGATTAAGAAAAAAAGTACAAACCAATGCCAGTCA 2100
Db 2041 TTGTAGTGTGTTTACAGCAGTGAAGATTAAGAAAAAAAGTACAAACCAATGCCAGTCA 2100
QY 2101 GGCACAGCAGAAACCTTACAGCTGAGAAAGTAAAGAACTGCACTGAGCCAGGAAGA 2160
Db 2101 GGCACAGCAGAAACCTTACAGCTGAGAAAGTAAAGAACTGCACTGAGCCAGGAAGA 2160
QY 2161 GTAAACAAGCCAAATGAACAGACAGCAAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
Db 2161 GTAAACAAGCCAAATGAACAGACAGCAAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
QY 2221 AGTTAAACAATGACACCTGCTTTTACTAAGTGTTCAAATACAGTGAATTAAGAAAT 2280
Db 2221 AGTTAAACAATGACACCTGCTTTTACTAAGTGTTCAAATACAGTGAATTAAGAAAT 2280
QY 2281 TTGTCAATCTAGCCTTCCAGAGAGAAAAAGAGAACTATACAAACAGTTAAAGTGT 2340
Db 2281 TTGTCAATCTAGCCTTCCAGAGAGAAAAAGAGAACTATACAAACAGTTAAAGTGT 2340
QY 2341 CTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTTGCAACG 2400
Db 2341 CTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTTGCAACG 2400
QY 2401 AAAATATCTGTGAAGAGTACAGCATTTTATGTTGTTACTGTTATATGACACTCAGG 2460
Db 2401 AAAATATCTGTGAAGAGTACAGCATTTTATGTTGTTACTGTTATATGACACTCAGG 2460
QY 2461 AAATATCTGTCTAGTGAAGTATGACACTCTAGGAGAGCAAAAACAGAACCAATTAAT 2520
Db 2461 AAATATCTGTCTAGTGAAGTATGACACTCTAGGAGAGCAAAAACAGAACCAATTAAT 2520
QY 2521 GTGTGAGTCACTGTGACAGCATTTGAAAAACCCCAAGGAGTAAATCATGTTGTTCCAAAG 2580
Db 2521 GTGTGAGTCACTGTGACAGCATTTGAAAAACCCCAAGGAGTAAATCATGTTGTTCCAAAG 2580
QY 2581 ATATATAGAAATGACAGAGAGGCTTTAAGTATCCATTGGGACATGAAGTTAACCAAGCTC 2640

Db 2581 ATATATAGAAATGACAGAGAGGCTTTAAGTATCCATTGGGACATGAAGTTAACCAAGCTC 2640
QY 2641 GGGAAACAAGCATAGAAATGGAAGAAAGTGAAGTCAAGTGTGATTTGAGAAATCAT 2700
Db 2641 GGGAAACAAGCATAGAAATGGAAGAAAGTGAAGTCAAGTGTGATTTGAGAAATCAT 2700
QY 2701 TCAAGTGTTCAAAAGGCCAGTCAATTTGCTGTGTTTCAATTCAGAAATGACAGAAAGG 2760
Db 2701 TCAAGTGTTCAAAAGGCCAGTCAATTTGCTGTGTTTCAATTCAGAAATGACAGAAAGG 2760
QY 2761 AATGTGCAACATTTCTGCTGCCACTGCTGGGCTCTTAAGAAACAAAGTCCAAATCATT 2820
Db 2761 AATGTGCAACATTTCTGCTGCCACTGCTGGGCTCTTAAGAAACAAAGTCCAAATCATT 2820
QY 2821 TTGAATGTGAACAAAGAGAAAGAAATCAAGAAAGAAATGAGTCAATATCAAGCCTGAC 2880
Db 2821 TTGAATGTGAACAAAGAGAAAGAAATCAAGAAAGAAATGAGTCAATATCAAGCCTGAC 2880
QY 2881 AGACAGTTAAATATCACTGAGGCTTCTGTGTGTGTGTCAGAAAGATTAAGCAGTGTATA 2940
Db 2881 AGACAGTTAAATATCACTGAGGCTTCTGTGTGTGTGTCAGAAAGATTAAGCAGTGTATA 2940
QY 2941 ATGCCAATGTATATCAAGAGAGGCTTAGTGTGTTCTATCTCATCTCAGTTCAGAGCA 3000
Db 2941 ATGCCAATGTATATCAAGAGAGGCTTAGTGTGTTCTATCTCATCTCAGTTCAGAGCA 3000
QY 3001 ACAGAACTGAGTCACTTCTCCAAATTAACATGAGCCTTTCAAAACCCATATGTTATAC 3060
Db 3001 ACAGAACTGAGTCACTTCTCCAAATTAACATGAGCCTTTCAAAACCCATATGTTATAC 3060
QY 3061 CACCACTTTTCCATCAAGTCAATTTGTTAAACATAATGTAAGAAAAATCTGCTAGAGG 3120
Db 3061 CACCACTTTTCCATCAAGTCAATTTGTTAAACATAATGTAAGAAAAATCTGCTAGAGG 3120
QY 3121 AAACTTTGAGAAATTTCAATGTCACCTGAAAGAAATGGGAAATGAGAACTTCCAA 3180
Db 3121 AAACTTTGAGAAATTTCAATGTCACCTGAAAGAAATGGGAAATGAGAACTTCCAA 3180
QY 3181 GTACAGTGAAGCAATTAAGCCTGATTAATCAATTAAGAAAGTTTTAAAGAACCCAGCT 3240
Db 3181 GTACAGTGAAGCAATTAAGCCTGATTAATCAATTAAGAAAGTTTTAAAGAACCCAGCT 3240
QY 3241 CAAGCAATTAATGAAGTGAAGTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAAA 3300
Db 3241 CAAGCAATTAATGAAGTGAAGTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAAA 3300
QY 3301 TAGGTTCCAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 3360
Db 3301 TAGGTTCCAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 3360
QY 3361 ATGCTATGCTTAGATTAGGCTTTTGCACCTGAGGCTTAATCAAAAGCTTCTGGAAG 3420
Db 3361 ATGCTATGCTTAGATTAGGCTTTTGCACCTGAGGCTTAATCAAAAGCTTCTGGAAG 3420
QY 3421 GTAATTTGAACATCTCGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 3480
Db 3421 GTAATTTGAACATCTCGAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 3480
QY 3481 ATACAGATTTCTCCATATCTGATTTCAAGTATTAAGTGAAGTGAAGTGAAGTGAAGTGA 3540
Db 3481 ATACAGATTTCTCCATATCTGATTTCAAGTATTAAGTGAAGTGAAGTGAAGTGAAGTGA 3540
QY 3541 ATGATCTCAGGTTTGTCTGAGACACTGATGATGATGATGATGATGATGATGATGATGAT 3600
Db 3541 ATGATCTCAGGTTTGTCTGAGACACTGATGATGATGATGATGATGATGATGATGATGAT 3600
QY 3601 AAGATACTAGTGTGCTGAATAATGACATTAAGAAAGTCTGCTGTTTATGCAAAAGCG 3660
Db 3601 AAGATACTAGTGTGCTGAATAATGACATTAAGAAAGTCTGCTGTTTATGCAAAAGCG 3660
QY 3661 TCCAGAAAGGAGACTTAGCAGAGGCTTACGCTTACCCATACACATTTGGCTCAGG 3720

Dd	3661	TCGAAAGAGAGACTTATGACGAGAGTCTACCCCTTTCACCAATACACATTGGCTAGG	3720
Oy	3721	GTATCCGAAGAGGGGCCAAGAAATTTAGAGTCTCAGAAAGAACTTATCTAGAGATG	3780
Dd	3721	GTATCCGAAGAGGGGCCAAGAAATTTAGAGTCTCAGAAAGAACTTATCTAGAGATG	3780
Oy	3781	AAGAGCTTCCCTGCTTCCACACTTGTATTGGTAAAGTAAACATATACCTTCTCAGT	3840
Dd	3781	AAGAGCTTCCCTGCTTCCACACTTGTATTGGTAAAGTAAACATATACCTTCTCAGT	3840
Oy	3841	CTACTAGGCAATGACACCGTGTCTACCGAGTGTGCTCTAACAACAGAGAGAAATTTAT	3900
Dd	3841	CTACTAGGCAATGACACCGTGTCTACCGAGTGTGCTCTAACAACAGAGAGAAATTTAT	3900
Oy	3901	TATCATTTGAAGAAATAGCTTAAATGACCTGACATACACAGTAAATTTGGCAAGGCATCTC	3960
Dd	3901	TATCATTTGAAGAAATAGCTTAAATGACCTGACATACACAGTAAATTTGGCAAGGCATCTC	3960
Oy	3961	AGGAACATCACCTTAGTGAAGAAACAAATGTTGCTAGCTTTCTTCCACAGTGA	4020
Dd	3961	AGGAACATCACCTTAGTGAAGAAACAAATGTTGCTAGCTTTCTTCCACAGTGA	4020
Oy	4021	GTGATTTGGAAGACTGTGACCTCAATACAAACACCCAGATCCCTTCTGATTTGGTCTT	4080
Dd	4021	GTGATTTGGAAGACTGTGACCTCAATACAAACACCCAGATCCCTTCTGATTTGGTCTT	4080
Oy	4081	CCAAACAATGAGGCATAGTCTGAAAGCCAGGAGTGTGCTGAGTACACAGAAATTTGG	4140
Dd	4081	CCAAACAATGAGGCATAGTCTGAAAGCCAGGAGTGTGCTGAGTACACAGAAATTTGG	4140
Oy	4141	TTTTCAGATGATGAAGAAAGAGGAACGGGCTTGGAAAGAAATTAATCAGAGAGCAACCA	4200
Dd	4141	TTTTCAGATGATGAAGAAAGAGGAACGGGCTTGGAAAGAAATTAATCAGAGAGCAACCA	4200
Oy	4201	TGGATTTCAAACTTATGAGTGAACACATCTGGGGTGGAGAGTGAACAAAGCTCTCTGAG	4260
Dd	4201	TGGATTTCAAACTTATGAGTGAACACATCTGGGGTGGAGAGTGAACAAAGCTCTCTGAG	4260
Oy	4261	ACTGCTCAGGGCTATCTCTCTCAGAGTGCATTTTAACCACTCAGCAGAGGATACCATGC	4320
Dd	4261	ACTGCTCAGGGCTATCTCTCTCAGAGTGCATTTTAACCACTCAGCAGAGGATACCATGC	4320
Oy	4321	AACATTAACCTGATTAAGTCTCCAGCAGAAATGCGTGAACCTAAGAGCTGTTAAACACGC	4380
Dd	4321	AACATTAACCTGATTAAGTCTCCAGCAGAAATGCGTGAACCTAAGAGCTGTTAAACACGC	4380
Oy	4381	ATGGGAGGACACCTTTTAACGATACCTTCATCATTAAGACATCTCTGCCCCCTTGAGG	4440
Dd	4381	ATGGGAGGACACCTTTTAACGATACCTTCATCATTAAGACATCTCTGCCCCCTTGAGG	4440
Oy	4441	ACTGTCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTAACTTAACCTCAGAAAAAGTA	4500
Dd	4441	ACTGTCGAAATCCAGAACAAAGACATCAGAAAAAGCAGTAACTTAACCTCAGAAAAAGTA	4500
Oy	4501	GTGAATACCTTATAAGCCAGATCCAGAAAGGCTTTTGTGTGACAAAGTTGAGGTGTCTG	4560
Dd	4501	GTGAATACCTTATAAGCCAGATCCAGAAAGGCTTTTGTGTGACAAAGTTGAGGTGTCTG	4560
Oy	4501	GTGAATACCTTATAAGCCAGATCCAGAAAGGCTTTTGTGTGACAAAGTTGAGGTGTCTG	4560
Dd	4501	GTGAATACCTTATAAGCCAGATCCAGAAAGGCTTTTGTGTGACAAAGTTGAGGTGTCTG	4560
Oy	4561	CAGATAGTCTTACACAGTAAATAATTAAGAACCCAGAGATGGAAGGTCAATCCCTCTTAAT	4620
Dd	4561	CAGATAGTCTTACACAGTAAATAATTAAGAACCCAGAGATGGAAGGTCAATCCCTCTTAAT	4620
Oy	4621	GCCCATCATTTAGATGATAGTGTGATACATGACACAGTGTCTTGGAGATCTTGAATTAAGAA	4680
Dd	4621	GCCCATCATTTAGATGATAGTGTGATACATGACACAGTGTCTTGGAGATCTTGAATTAAGAA	4680
Oy	4681	ACTACCATCTCAAGAGAGAGCTCATTAAGTGTGATGTGAGAGAGCAACAGCTGGAAG	4740
Dd	4681	ACTACCATCTCAAGAGAGAGCTCATTAAGTGTGATGTGAGAGAGCAACAGCTGGAAG	4740
Oy	4741	AGTCTGGGCCACACGATTTTACGGAACATCTTACTTCCCAAGCAGATCTTAAGAGGAA	4800
Dd	4741	AGTCTGGGCCACACGATTTTACGGAACATCTTACTTCCCAAGCAGATCTTAAGAGGAA	4800

QY	4801	CCCCCTACCTGGAAATCTGGAAATCAGCCCTTCTCTGATGACCCCTGAATCTATCCTTGTG	4860
Db	4801	CCCCCTACCTGGAAATCTGGAAATCAGCCCTTCTCTGATGACCCCTGAATCTATCCTTGTG	4860
QY	4861	AAGACAGAGCCCGACAGAGTACGTGTGTGGCAACATCCAACTTCAACGCTGCATGTGA	4920
Db	4861	AAGACAGAGCCCGACAGTACGTGTGTGGCAACATCCAACTTCAACGCTGCATGTGA	4920
QY	4921	AAGTTCGCCCAATTTGAAAGTTGCGAANTGTGCCAGAGTCCAGCTGCTCTCATACTACTG	4980
Db	4921	AAGTTCGCCCAATTTGAAAGTTGCGAANTGTGCCAGAGTCCAGCTGCTCTCATACTACTG	4980
QY	4981	ATACTGCTGGGTATATATGCAATTCGAAGAAATGTGTAGCAGGAGAGAACCCAGAAATTGACG	5040
Db	4981	ATACTGCTGGGTATATATGCAATTCGAAGAAATGTGTAGCAGGAGAGAACCCAGAAATTGACG	5040
QY	5041	CTTCAACAGAAAGGGTCAACAAGAAATGTCCATGSGTGTGCTGCGCTGAGCCCGAGAG	5100
Db	5041	CTTCAACAGAAAGGGTCAACAAGAAATGTCCATGSGTGTGCTGCGCTGAGCCCGAGAG	5100
QY	5101	AATTTATGCTGTGTACAAAGTTTGGCAGAAAAACACACATCATCTTAATCTAATTA	5160
Db	5101	AATTTATGCTGTGTACAAAGTTTGGCAGAAAAACACACATCATCTTAATCTAATTA	5160
QY	5161	CTGAAGAGACTACTCATCTTGTGTATGAAGAAACAGATGCTGAGTTTGTGTGAACGGACAC	5220
Db	5161	CTGAAGAGACTACTCATCTTGTGTATGAAGAAACAGATGCTGAGTTTGTGTGAACGGACAC	5220
QY	5221	TGAAATATATTTCTAGGAATTCGGGAGGAGAAATGGGTAGTATGCTATTTCTGGGGTACCC	5280
Db	5221	TGAAATATATTTCTAGGAATTCGGGAGGAGAAATGGGTAGTATGCTATTTCTGGGGTACCC	5280
QY	5281	AGCTATTATTAAGAAAAAATAATGCTGAATGAGCATGATTTTGAAGTCCAGAGAGATGTGG	5340
Db	5281	AGCTATTATTAAGAAAAAATAATGCTGAATGAGCATGATTTTGAAGTCCAGAGAGATGTGG	5340
QY	5341	TCATATGGAAGAACCCACCAGGTCCAAAGCGACAGAAAGAAATCCCGAGACAGAAAGATCT	5400
Db	5341	TCATATGGAAGAACCCACCAGGTCCAAAGCGACAGAAAGAAATCCCGAGACAGAAAGATCT	5400
QY	5401	TCAGGGGGCTGAAATCTGTTGCTATATGAGGGCCCTTCCACCAATGCGCCACAAATCAACTGG	5460
Db	5401	TCAGGGGGCTGAAATCTGTTGCTATATGAGGGCCCTTCCACCAATGCGCCACAAATCAACTGG	5460
QY	5461	AATGATGGTCAAGCTGTGTGTGCTTCTGTGTGTAAGAGAGCTTTCAATCAATCAACCTTGG	5520
Db	5461	AATGATGGTCAAGCTGTGTGTGCTTCTGTGTGTAAGAGAGCTTTCAATCAATCAACCTTGG	5520
QY	5521	GCACAGGTGCACCCCAATTTGTTGGTGTGACGCCAGAGTCCCTGAGCAGAGAAATGGCT	5580
Db	5521	GCACAGGTGCACCCCAATTTGTTGGTGTGACGCCAGAGTCCCTGAGCAGAGAAATGGCT	5580
QY	5581	TCCATATGCAATTTGGGAGATGTGTGAGGACCTGTGTGTATCCCGAGAGTGGGTGTTGGACA	5640
Db	5581	TCCATATGCAATTTGGGAGATGTGTGAGGACCTGTGTGTATCCCGAGAGTGGGTGTTGGACA	5640
QY	5641	GTTAGACACTCTACCAAGTGCAGAGAGCTGACACCTACTACTATACCCAGATCCCCACACA	5700
Db	5641	GTTAGACACTCTACCAAGTGCAGAGAGCTGACACCTACTACTATACCCAGATCCCCACACA	5700
QY	5701	GGCACTACTGA 5711	
Db	5701	GGCACTACTGA 5711	

RESULT 14
US-08-850-727-1
; Sequence 1, Application US/08850727
; Patent No. 6162897
; GENERAL INFORMATION:
; APPLICANT: Skolnick, Mark H.
; APPLICANT: Goldgar, David E.

APPLICANT: Miki, Yoshio
 APPLICANT: Swenson, Jeff
 APPLICANT: Kamb, Alexander
 APPLICANT: Harshman, Keith D.
 APPLICANT: Shattuck-Eidens, Donna M.
 APPLICANT: Tavligian, Sean V.
 APPLICANT: Wiseman, Roger W.
 APPLICANT: Futreal, P. Andrew
 TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
 TITLE OF INVENTION: Susceptibility Gene
 NUMBER OF SEQUENCES: 85
 CORRESPONDENCE ADDRESSES:
 ADDRESS: Venable, Baetjer, Howard & Civiletti, LLP
 STREET: 1201 New York Avenue, N.W., Suite 1000
 CITY: Washington
 STATE: DC
 COUNTRY: USA
 ZIP: 20005
 COMPUTER READABLE FORM:
 MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: Patent Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/850,727
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/483,554
 FILING DATE: 07-JUN-1995
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/348,824
 FILING DATE: 29-NOV-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/308,104
 FILING DATE: 16-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/300,266
 FILING DATE: 02-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/289,221
 FILING DATE: 12-AUG-1994
 ATTORNEY/AGENT INFORMATION:
 NAME: Ihnen, Jeffrey L.
 REGISTRATION NUMBER: 28,957
 REFERENCE/DOCKET NUMBER: 24884-109347
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 202-962-4810
 TELEFAX: 202-962-8300
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 5914 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: double
 TOPOLOGY: linear
 MOLECULE TYPE: cDNA
 HYPOTHEICAL: NO
 ANTI-SENSE: NO
 ORIGINAL SOURCE:
 ORGANISM: Homo sapiens
 FEATURE:
 NAME/KEY: CDS
 LOCATION: 120..5708
 US-08-850-727-1

Query Match 99.9%; Score 5707.8; DB 4; Length 5914;
 Best Local Similarity 100.0%; Pred. NO. 0;
 Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 AGCTCGGTGAGACTTCTGAGACCCGACAGAGCTGTGGGTTCTCAGATACTGGCC 60
 Db 1 AGCTCGGTGAGACTTCTGAGACCCGACAGAGCTGTGGGTTCTCAGATACTGGCC 60

QY 61 CCTGGCTCAGAGAGGCTTACCTCTCTGCTGTAAGTTCATTTGGACAGAAAGAA 120
 Db 61 CCTGGCTCAGAGAGGCTTACCTCTCTGCTGTAAGTTCATTTGGACAGAAAGAA 120
 QY 121 TGGATTATCTGCTCTTGGCGTTGAGAAAGTACAAATATGCTATATGCTATGCAAAA 180
 Db 121 TGGATTATCTGCTCTTGGCGTTGAGAAAGTACAAATATGCTATATGCTATGCAAAA 180
 QY 181 TCTTAGAGTCCCACTGCTGAGTTGATCAAGAAAGCTGTCCCAAGAGTGGACC 240
 Db 181 TCTTAGAGTCCCACTGCTGAGTTGATCAAGAAAGCTGTCCCAAGAGTGGACC 240
 QY 241 ACATATTTTGCATAATTTTGCATGCTGAACCTTCTCAACAGAGAAAGGGCTTACAGT 300
 Db 241 ACATATTTTGCATAATTTTGCATGCTGAACCTTCTCAACAGAGAAAGGGCTTACAGT 300
 QY 301 GTCTTTATGTAAGATGATATACCAAAAGAGCTTCAAGAAAGTACGAGATTGTGTC 360
 Db 301 GTCTTTATGTAAGATGATATACCAAAAGAGCTTCAAGAAAGTACGAGATTGTGTC 360
 QY 361 AACTGTTGAGAGCTATTTGAAAATCATTTTGTGCTTACAGTTGAGAGT 420
 Db 361 AACTGTTGAGAGCTATTTGAAAATCATTTTGTGCTTACAGTTGAGAGT 420
 QY 421 ATGCAACAGCTATATTTTGCATAAAAGAAATATCTGCTGAAATCTTAAAGATG 480
 Db 421 ATGCAACAGCTATATTTTGCATAAAAGAAATATCTGCTGAAATCTTAAAGATG 480
 QY 481 AAGTTTATATCTCAAAAGTATGGCTACAAACCCGCAAAAGACTTCTACAGAGTG 540
 Db 481 AAGTTTATATCTCAAAAGTATGGCTACAAACCCGCAAAAGACTTCTACAGAGTG 540
 QY 541 AACCCGAAATCCTTCTGTCAGAGAAACAGCTCAGTCAACTCTTAACTTGAAGAA 600
 Db 541 AACCCGAAATCCTTCTGTCAGAGAAACAGCTCAGTCAACTCTTAACTTGAAGAA 600
 QY 601 CTGTGAGAACTCTGAGACAAAGAGCGGATACCACTCAAAAGAGCTGTGTACATTTG 660
 Db 601 CTGTGAGAACTCTGAGACAAAGAGCGGATACCACTCAAAAGAGCTGTGTACATTTG 660
 QY 661 AATTGGATTCGATTTCTGTAAGATACCGTAAATTAAGCAATTAATGAGTGGAG 720
 Db 661 AATTGGATTCGATTTCTGTAAGATACCGTAAATTAAGCAATTAATGAGTGGAG 720
 QY 721 ATCAAGATTTGTAAATCAACCCCTCAAGAGACAGGAGTAATGAGTTGATCTG 780
 Db 721 ATCAAGATTTGTAAATCAACCCCTCAAGAGACAGGAGTAATGAGTTGATCTG 780
 QY 781 CAAAAAGGCTGCTTGTGAATTTCTGAGACGATGTAACTAATCTGAATCATC 840
 Db 781 CAAAAAGGCTGCTTGTGAATTTCTGAGACGATGTAACTAATCTGAATCATC 840
 QY 841 CCAGTAATATGATTTGAACACCACTGAGAGCGTGCAGCTGAGAGGATCCAGAAAAGT 900
 Db 841 CCAGTAATATGATTTGAACACCACTGAGAGCGTGCAGCTGAGAGGATCCAGAAAAGT 900
 QY 901 ATCAGGTAATTTCTGTTTCAAACTGCAATGTGAGACCATGTGGCAAAATACATCCCA 960
 Db 901 ATCAGGTAATTTCTGTTTCAAACTGCAATGTGAGACCATGTGGCAAAATACATCCCA 960
 QY 961 GCTCATTCACAGTGAAGAAAGCAAGTATATATCTCACTAAAGACAGATATTAAGTAA 1020
 Db 961 GCTCATTCACAGTGAAGAAAGCAAGTATATATCTCACTAAAGACAGATATTAAGTAA 1020
 QY 1021 AGGCTGAATTCGTATATTAAGCAACAGCTTGCTTACAGAGGACCAATTAAGAT 1080
 Db 1021 AGGCTGAATTCGTATATTAAGCAACAGCTTGCTTACAGAGGACCAATTAAGAT 1080
 QY 1081 GGGCTGAAGTAAAGAAACATGATATGATAGCGGACTCCACAGCAGAAAAAGGTAG 1140
 Db 1081 GGGCTGAAGTAAAGAAACATGATATGATAGCGGACTCCACAGCAGAAAAAGGTAG 1140
 QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAGAAATCTGCATGCT 1200

```
|||||
Db 1141 ATCGATGCTGATCCCTGCTGTGAGAGAAAGTAATGAACAGAAACTGCCATGCT 1200
QY 1201 CAGGAAATCCTAGAGATACCTGAGATGCTCTTGATTAACATTAATAGCAGCTTGA 1260
Db 1201 CAGGAAATCCTAGAGATACCTGAGATGCTCTTGATTAACATTAATAGCAGCTTGA 1260
QY 1261 AAGTAATGAGTGGTCTTCCAGAGATGATGAAGTGAAGTGGTCTGATGACCTGATGATG 1320
Db 1261 AAGTAATGAGTGGTCTTCCAGAGATGATGAAGTGAAGTGGTCTGATGACCTGATGATG 1320
QY 1321 GGGAGTCTGAATCAAAATGCCAAAGTACCTGATGATGATGATGATGATGATGATGATG 1380
Db 1321 GGGAGTCTGAATCAAAATGCCAAAGTACCTGATGATGATGATGATGATGATGATGATG 1380
QY 1381 AATATCTGCTTCTTCAGAGAGAAATATAGACTTACGCGCAGTATCTCATAGAGCTTAA 1440
Db 1381 AATATCTGCTTCTTCAGAGAGAAATATAGACTTACGCGCAGTATCTCATAGAGCTTAA 1440
QY 1441 TATGTAAAGTGAAGAGATTCACCTCAATCAGTAGAGATATATATGAAGACAAATAT 1500
Db 1441 TATGTAAAGTGAAGAGATTCACCTCAATCAGTAGAGATATATATGAAGACAAATAT 1500
QY 1501 TTGGGAAAACCTATCGGAGAGGCAAGCCTCCCACTTAAGCCATGTAACTGAATATC 1560
Db 1501 TTGGGAAAACCTATCGGAGAGGCAAGCCTCCCACTTAAGCCATGTAACTGAATATC 1560
QY 1561 TAATATAGAGAGCTTTGTTACTGAGCAGATATATATCAAGAGCCTCCCTCAAAATA 1620
Db 1561 TAATATAGAGAGCTTTGTTACTGAGCAGATATATATCAAGAGCCTCCCTCAAAATA 1620
QY 1621 AATTAAGCGTAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1680
Db 1621 AATTAAGCGTAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1680
QY 1681 CAGATTTGGCAGTTCAAAAGAGCTCTCAATATGATTAATCAAGGAGTAAACCAAGAGC 1740
Db 1681 CAGATTTGGCAGTTCAAAAGAGCTCTCAATATGATTAATCAAGGAGTAAACCAAGAGC 1740
QY 1741 AGATAGTCAAGTCAATATATATATATATATATATATATATATATATATATATATAT 1800
Db 1741 AGATAGTCAAGTCAATATATATATATATATATATATATATATATATATATATATAT 1800
QY 1801 CTATTCAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1860
Db 1801 CTATTCAGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1860
QY 1861 AAACGAAAGCTGAACCTATTAAGCAGAGATTAAGCAATATGAACTGAAATTAATATCC 1920
Db 1861 AAACGAAAGCTGAACCTATTAAGCAGAGATTAAGCAATATGAACTGAAATTAATATCC 1920
QY 1921 ACAATTTAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1980
Db 1921 ACAATTTAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 1980
QY 1981 ATGGGCTTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 2040
Db 1981 ATGGGCTTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 2040
QY 2041 TTGATAGTGTCTTACGAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 2100
Db 2041 TTGATAGTGTCTTACGAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 2100
QY 2101 GGGCAGCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2160
Db 2101 GGGCAGCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2160
QY 2161 GTAACAAGCCAAATGAACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2220
Db 2161 GTAACAAGCCAAATGAACAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2220
QY 2221 AGTTAACAAATGACCTGCTGCTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAGAT 2280
Db 2221 AGTTAACAAATGACCTGCTGCTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAGAT 2280
|||||
Db 2281 AGTTAACAAATGACCTGCTGCTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAGAT 2280
QY 2281 TTGTCAATCCAGGCTTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2340
Db 2281 TTGTCAATCCAGGCTTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2340
QY 2341 CTAATATGCTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2400
Db 2341 CTAATATGCTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2400
QY 2401 AAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2460
Db 2401 AAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2460
QY 2461 AAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2520
Db 2461 AAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2520
QY 2521 GTGTGAGTCAAGTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2580
Db 2521 GTGTGAGTCAAGTGTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2580
QY 2581 ATATATAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2640
Db 2581 ATATATAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2640
QY 2641 GGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2700
Db 2641 GGGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2700
QY 2701 TCAAGTGTTCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2760
Db 2701 TCAAGTGTTCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2760
QY 2761 AATGTGCAACATCTCTGCCCACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2820
Db 2761 AATGTGCAACATCTCTGCCCACCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2820
QY 2821 TTGAATGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2880
Db 2821 TTGAATGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2880
QY 2881 AGAGAGTGAATATACCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2940
Db 2881 AGAGAGTGAATATACCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2940
QY 2941 ATGCGAAATGTAGATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3000
Db 2941 ATGCGAAATGTAGATCAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3000
QY 3001 ACAGAACTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3060
Db 3001 ACAGAACTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3060
QY 3061 CACCACTTTTCCCATCAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 3120
Db 3061 CACCACTTTTCCCATCAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 3120
QY 3121 AAAACTTTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3180
Db 3121 AAAACTTTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3180
QY 3181 GTACAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3240
Db 3181 GTACAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3240
QY 3241 CAAGCAATATTAATGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 3300
Db 3241 CAAGCAATATTAATGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 3300
QY 3301 TAGGTTCCAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3360
Db 3301 TAGGTTCCAGTGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3360
|||||
```

QY 3361 ATGCTATGCTTAGATTAGGGTTTTCACACCTGAGGTCTATPAACAAGTCTTCTCGGA 3420
|||||
Db 3361 ATGCTATGCTTAGATTAGGGTTTTCACACCTGAGGTCTATPAACAAGTCTTCTCGGA 3420
QY 3421 GTAATTGTAGCATCTGTAATTAATAAAGCAAGAAATGAGAGAGTACTGACAGTGTTA 3480
|||||
Db 3421 GTAATTGTAGCATCTGTAATTAATAAAGCAAGAAATGAGAGAGTACTGACAGTGTTA 3480
QY 3481 ATACAGATTCTCCCATATCTGATTTCAGATTAATCTGAAACAGCTTATGGAACTAGTC 3540
|||||
Db 3481 ATACAGATTCTCCCATATCTGATTTCAGATTAATCTGAAACAGCTTATGGAACTAGTC 3540
QY 3541 ATGCACTCAGAGTTTGTCTGAGACACCTGATGACCTGTAGATGATGATGATGATGATG 3600
3541 ATGCACTCAGAGTTTGTCTGAGACACCTGATGACCTGTAGATGATGATGATGATGATG 3600
Db 3541 ATGCACTCAGAGTTTGTCTGAGACACCTGATGACCTGTAGATGATGATGATGATGATG 3600
QY 3601 AAGATCTAGTGTGCTGAGAAATGACATTAAGAAAGTCTGCTGTTTTCAGCAAAAGCG 3660
|||||
Db 3601 AAGATCTAGTGTGCTGAGAAATGACATTAAGAAAGTCTGCTGTTTTCAGCAAAAGCG 3660
QY 3661 TCCAGAAAGAGAGCTTAGCAGAGTCTAGCCCTTTCACCCATACATTTGGCTCAGG 3720
|||||
Db 3661 TCCAGAAAGAGAGCTTAGCAGAGTCTAGCCCTTTCACCCATACATTTGGCTCAGG 3720
QY 3721 GTTACCGAAGAGGGGCCAAGAAATTAGAGTCTCAGAAAGAGAACTTATCTAGTGAAGATG 3780
3721 GTTACCGAAGAGGGGCCAAGAAATTAGAGTCTCAGAAAGAGAACTTATCTAGTGAAGATG 3780
Db 3721 GTTACCGAAGAGGGGCCAAGAAATTAGAGTCTCAGAAAGAGAACTTATCTAGTGAAGATG 3780
QY 3781 AAGAGCTTCCCTGCTCCCAACACTTGTATTGTAAGTAACAAATFACCTCTCAGT 3840
3781 AAGAGCTTCCCTGCTCCCAACACTTGTATTGTAAGTAACAAATFACCTCTCAGT 3840
Db 3781 AAGAGCTTCCCTGCTCCCAACACTTGTATTGTAAGTAACAAATFACCTCTCAGT 3840
QY 3841 CTACTAGGCATAGCAGCGTGTCTACCGAGTCTGCTAGAAACACAGAGAGAAATTAT 3900
|||||
Db 3841 CTACTAGGCATAGCAGCGTGTCTACCGAGTCTGCTAGAAACACAGAGAGAAATTAT 3900
QY 3901 TATCATTTGAGAAATAGCTTAATGACTGCAATACAGATTAATTTGGCAAGGCATCTC 3960
3901 TATCATTTGAGAAATAGCTTAATGACTGCAATACAGATTAATTTGGCAAGGCATCTC 3960
Db 3901 TATCATTTGAGAAATAGCTTAATGACTGCAATACAGATTAATTTGGCAAGGCATCTC 3960
QY 3961 AGGAACATCACCTTAGTGAAGAAACAAATTTCTGCTAGCTGTTTCTTCACAGTCA 4020
3961 AGGAACATCACCTTAGTGAAGAAACAAATTTCTGCTAGCTGTTTCTTCACAGTCA 4020
Db 3961 AGGAACATCACCTTAGTGAAGAAACAAATTTCTGCTAGCTGTTTCTTCACAGTCA 4020
QY 4021 GTGAAATTGGAAGACTTGTACTGCAAAATACAAACACCAGAGTCTTCTTGAATGCTT 4080
|||||
Db 4021 GTGAAATTGGAAGACTTGTACTGCAAAATACAAACACCAGAGTCTTCTTGAATGCTT 4080
QY 4081 CCAAAACAATGAGCATCAGTCTGAAAGCCAGGGAGTGTGCTGAGTACAAAGAAATGG 4140
4081 CCAAAACAATGAGCATCAGTCTGAAAGCCAGGGAGTGTGCTGAGTACAAAGAAATGG 4140
Db 4081 CCAAAACAATGAGCATCAGTCTGAAAGCCAGGGAGTGTGCTGAGTACAAAGAAATGG 4140
QY 4141 TTTGAGATGATGAGAAAGAGAAAGGGGCTGGAAGAAATPAATPAATAAAGACAAACA 4200
4141 TTTGAGATGATGAGAAAGAGAAAGGGGCTGGAAGAAATPAATPAATAAAGACAAACA 4200
Db 4141 TTTGAGATGATGAGAAAGAGAAAGGGGCTGGAAGAAATPAATPAATAAAGACAAACA 4200
QY 4201 TGGATTCAAACTTAGTGAAGCAGCATCTGGGTGTGAAGTGAAGCAAGCCGCTCTGAAG 4260
4201 TGGATTCAAACTTAGTGAAGCAGCATCTGGGTGTGAAGTGAAGCAAGCCGCTCTGAAG 4260
Db 4201 TGGATTCAAACTTAGTGAAGCAGCATCTGGGTGTGAAGTGAAGCAAGCCGCTCTGAAG 4260
QY 4261 ACTGCTCAGGGCTATCTCTCAGAGTGAATTTAACACATCAGAGAGGATACCATGTC 4320
4261 ACTGCTCAGGGCTATCTCTCAGAGTGAATTTAACACATCAGAGAGGATACCATGTC 4320
Db 4261 ACTGCTCAGGGCTATCTCTCAGAGTGAATTTAACACATCAGAGAGGATACCATGTC 4320
QY 4321 AACATACCTGATTAACCTCCAGAGAAATGGCTGAAGTGAAGTGTGTTAAGAACGC 4380
4321 AACATACCTGATTAACCTCCAGAGAAATGGCTGAAGTGAAGTGTGTTAAGAACGC 4380
Db 4321 AACATACCTGATTAACCTCCAGAGAAATGGCTGAAGTGAAGTGTGTTAAGAACGC 4380
QY 4381 ATGGAGACCAGGCTTCTAACAGTACCTTCATCATPAAGTACCTTCTGCGCTGAGG 4440
4381 ATGGAGACCAGGCTTCTAACAGTACCTTCATCATPAAGTACCTTCTGCGCTGAGG 4440
Db 4381 ATGGAGACCAGGCTTCTAACAGTACCTTCATCATPAAGTACCTTCTGCGCTGAGG 4440

QY 4441 ACCTCGAAATTCAGAACAAAGCAGATCAGAAAAAGCATTAATCTACAGAAAAAGTA 4500
|||||
Db 4441 ACCTCGAAATTCAGAACAAAGCAGATCAGAAAAAGCATTAATCTACAGAAAAAGTA 4500
QY 4501 GTGAATFACCTTATTAAGCCAGAAATCAGAAAGCCTTTCTGCTGACAAATTTGAGTGTCTG 4560
|||||
Db 4501 GTGAATFACCTTATTAAGCCAGAAATCAGAAAGCCTTTCTGCTGACAAATTTGAGTGTCTG 4560
QY 4561 CAGATAGTCTACAGAGTAAATTAAGAAACAGAGAGTGAAGAGTCAATCCCTCTTAAT 4620
4561 CAGATAGTCTACAGAGTAAATTAAGAAACAGAGAGTGAAGAGTCAATCCCTCTTAAT 4620
Db 4561 CAGATAGTCTACAGAGTAAATTAAGAAACAGAGAGTGAAGAGTCAATCCCTCTTAAT 4620
QY 4621 GCCCATCATATGATGATAGGTGATACATGACACAGTGTGCTGAGAGTCTTACAAATGAA 4680
4621 GCCCATCATATGATGATAGGTGATACATGACACAGTGTGCTGAGAGTCTTACAAATGAA 4680
Db 4621 GCCCATCATATGATGATAGGTGATACATGACACAGTGTGCTGAGAGTCTTACAAATGAA 4680
QY 4681 ACTACCCATCTCAAGAGAGGCTCATTAAGTGTGATGATGAGAGAGCAACAGCTGGAAG 4740
4681 ACTACCCATCTCAAGAGAGGCTCATTAAGTGTGATGATGAGAGAGCAACAGCTGGAAG 4740
Db 4681 ACTACCCATCTCAAGAGAGGCTCATTAAGTGTGATGATGAGAGAGCAACAGCTGGAAG 4740
QY 4741 AGTCTGGGCCACAGATTTGACGGAACATCTTACTTGCCAAAGCAGATCTAGAGGAA 4800
4741 AGTCTGGGCCACAGATTTGACGGAACATCTTACTTGCCAAAGCAGATCTAGAGGAA 4800
Db 4741 AGTCTGGGCCACAGATTTGACGGAACATCTTACTTGCCAAAGCAGATCTAGAGGAA 4800
QY 4801 CCCCTTACCTGGAATCTGGAATCAGCCTCTTCTGATGACCTGAAATCTGATCTTCTG 4860
4801 CCCCTTACCTGGAATCTGGAATCAGCCTCTTCTGATGACCTGAAATCTGATCTTCTG 4860
Db 4801 CCCCTTACCTGGAATCTGGAATCAGCCTCTTCTGATGACCTGAAATCTGATCTTCTG 4860
QY 4861 AAGACAGAGCCCGAGTACAGTGTGTGCAACATACATCTTCAACCTGCAANTGA 4920
4861 AAGACAGAGCCCGAGTACAGTGTGTGCAACATACATCTTCAACCTGCAANTGA 4920
Db 4861 AAGACAGAGCCCGAGTACAGTGTGTGCAACATACATCTTCAACCTGCAANTGA 4920
QY 4921 AAGTTCGCCAATTTGAAATCTGCAAAATCTGCCAGAGTCCAGTCTGCTCATACTACTG 4980
4921 AAGTTCGCCAATTTGAAATCTGCAAAATCTGCCAGAGTCCAGTCTGCTCATACTACTG 4980
Db 4921 AAGTTCGCCAATTTGAAATCTGCAAAATCTGCCAGAGTCCAGTCTGCTCATACTACTG 4980
QY 4981 ATACTGCTGGGTATATATCAATGAAAGAAATGTGACAGAGGAGAAACCGAAATTTGACG 5040
4981 ATACTGCTGGGTATATATCAATGAAAGAAATGTGACAGAGGAGAAACCGAAATTTGACG 5040
Db 4981 ATACTGCTGGGTATATATCAATGAAAGAAATGTGACAGAGGAGAAACCGAAATTTGACG 5040
QY 5041 CTTCACAGAAAGGGTCAACAAAGAAATGTCCATGAGTGTGCTGAGTGTGTTGACCCCAAG 5100
5041 CTTCACAGAAAGGGTCAACAAAGAAATGTCCATGAGTGTGCTGAGTGTGTTGACCCCAAG 5100
Db 5041 CTTCACAGAAAGGGTCAACAAAGAAATGTCCATGAGTGTGCTGAGTGTGTTGACCCCAAG 5100
QY 5101 AATTTATGCTGCTGATACAGTTTGCAGAAAAACCAATCATCTTAATTAATTA 5160
5101 AATTTATGCTGCTGATACAGTTTGCAGAAAAACCAATCATCTTAATTAATTA 5160
Db 5101 AATTTATGCTGCTGATACAGTTTGCAGAAAAACCAATCATCTTAATTAATTA 5160
QY 5161 CTGAAGACATCTCATGCTGTTATGAAGAACATGCTGAGTGTGTGTAACGGACAC 5220
5161 CTGAAGACATCTCATGCTGTTATGAAGAACATGCTGAGTGTGTGTAACGGACAC 5220
Db 5161 CTGAAGACATCTCATGCTGTTATGAAGAACATGCTGAGTGTGTGTAACGGACAC 5220
QY 5221 TGAATATTTTCTGGAATTCGGGAGAGAAATGGAGTGTAGTACTTATTTGGGTGACCC 5280
5221 TGAATATTTTCTGGAATTCGGGAGAGAAATGGAGTGTAGTACTTATTTGGGTGACCC 5280
Db 5221 TGAATATTTTCTGGAATTCGGGAGAGAAATGGAGTGTAGTACTTATTTGGGTGACCC 5280
QY 5281 AGCTATTTAAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAGATGTGG 5340
5281 AGCTATTTAAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAGATGTGG 5340
Db 5281 AGCTATTTAAAGAAAGAAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAGATGTGG 5340
QY 5341 TCAATGGAAGAAACCCAGAGTCCAAAGGAGAGCAAGAAATCCAGAGAGAGAAATCT 5400
5341 TCAATGGAAGAAACCCAGAGTCCAAAGGAGAGCAAGAAATCCAGAGAGAGAAATCT 5400
Db 5341 TCAATGGAAGAAACCCAGAGTCCAAAGGAGAGCAAGAAATCCAGAGAGAGAAATCT 5400
QY 5401 TCAGGGGGCTGAATGCTGTTGCTAGGGGCTTACCAACATGAGCCACAGATCAACTGG 5460
5401 TCAGGGGGCTGAATGCTGTTGCTAGGGGCTTACCAACATGAGCCACAGATCAACTGG 5460
Db 5401 TCAGGGGGCTGAATGCTGTTGCTAGGGGCTTACCAACATGAGCCACAGATCAACTGG 5460
QY 5461 AATGGATGATACAGTCTGATGCTTCTGATGGAAGAGAGCTTTCATCTTACCTTGG 5520
5461 AATGGATGATACAGTCTGATGCTTCTGATGGAAGAGAGCTTTCATCTTACCTTGG 5520
Db 5461 AATGGATGATACAGTCTGATGCTTCTGATGGAAGAGAGCTTTCATCTTACCTTGG 5520
QY 5521 GCACAGGTGTCACCAATTTGTGTTGTGACAGCCAGATGCTTGAGACAGAGCAATGGCT 5580


```

Db 5521 GCACAGGTGCGCCACCAATGTTGTTGTGAGCCAGATGCTGGACAGAGCAATGGCT 5580
QY 5581 TCCATGCAATGGGAGATGTGTGAGGACCCCTGTGTGACCCGAGAGTGGCTTGGACA 5640
Db 5581 TCCATGCAATGGGAGATGTGTGAGGACCCCTGTGTGACCCGAGAGTGGCTTGGACA 5640
QY 5641 GTGTACACTCTTACAGTCCAGAGCTGGACACTACCTAGTATCCCGAGATCCCGACA 5700
Db 5641 GTGTACACTCTTACAGTCCAGAGCTGGACACTACCTAGTATCCCGAGATCCCGACA 5700
QY 5701 GCCACTACTGA 5711
Db 5701 GCCACTACTGA 5711

RESULT 15
PCT-US95-10202-1
Sequence 1, Application PC/TUS9510202
GENERAL INFORMATION:
APPLICANT: Shattuck-Eldens, Donna M.
APPLICANT: Simard, Jacques
APPLICANT: Eml, Mitsuru
APPLICANT: Nakamura, Yusuke
APPLICANT: Durocher, Francine
TITLE OF INVENTION: In Vivo Mutations and Polymorphisms
TITLE OF INVENTION: In the 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESS: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
OPERATING SYSTEM: IBM PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10202
FILING DATE:
CLASSIFICATION:
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-JUN-1995
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08-308,104
FILING DATE: 16-SEP-1994
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIORITY APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs

```

```

? TYPE: nucleic acid
? STRANDEDNESS: double
? TOPOLOGY: linear
? MOLECULE TYPE: cDNA
? HYPOTHETICAL: NO
? ANTI-SENSE: NO
? ORIGINAL SOURCE:
? ORGANISM: Homo sapiens
? FEATURE:
? NAME/KEY: CDS
? LOCATION: 120..5711
? PCT-US95-10202-1

Query Match 99.9%; Score 5707.8; DB 5; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5709; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 AGCTCGCTGAGACTTCCTGAGACCCCGACAGGCTGTGGGGTTCTCAGATACTGGGCC 60
Db 1 AGCTCGCTGAGACTTCCTGAGACCCCGACAGGCTGTGGGGTTCTCAGATACTGGGCC 60
QY 61 CCTGGCTCAGAGAGGCTTCACCTCTCTCTGGTAAAGTTATTGGAACAGAAAGAAA 120
Db 61 CCTGGCTCAGAGAGGCTTCACCTCTCTCTGGTAAAGTTATTGGAACAGAAAGAAA 120
QY 121 TGGATTATCTGCTCTGGGTTGAAGAAATGATCAATATGATATGATGACAGAAA 180
Db 121 TGGATTATCTGCTCTGGGTTGAAGAAATGATCAATATGATATGATGACAGAAA 180
QY 181 TCTTAGAGTGTCCTCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAGTGTCACC 240
Db 181 TCTTAGAGTGTCCTCATCTGTCTGAGTTGATCAAGAACTGTCTCCAAAGTGTCACC 240
QY 241 ACAATTTTGGCAATTTTGTGATGCTGAATTTCTCAACGAAAGAGGCTTCACAGT 300
Db 241 ACAATTTTGGCAATTTTGTGATGCTGAATTTCTCAACGAAAGAGGCTTCACAGT 300
QY 301 GTCCCTTATGATAGATGATATACCAAAAGAGGCTTACAAAGAAATGAGATTTAGTC 360
Db 301 GTCCCTTATGATAGATGATATACCAAAAGAGGCTTACAAAGAAATGAGATTTAGTC 360
QY 361 AACTTGTGAAGAGCTATGAAATATGTTGCTTTGACCTTGAACAGGTTTGAGT 420
Db 361 AACTTGTGAAGAGCTATGAAATATGTTGCTTTGACCTTGAACAGGTTTGAGT 420
QY 421 ATGCAAAAGAGCTATGAAATATGTTGCTTTGACCTTGAACAGGTTTGAGT 480
Db 421 ATGCAAAAGAGCTATGAAATATGTTGCTTTGACCTTGAACAGGTTTGAGT 480
QY 481 AAGTTCTATCATCCAAAGATGAGGCTTACGAAACGCTGCAAAAGAGCTTACAGAGT 540
Db 481 AAGTTCTATCATCCAAAGATGAGGCTTACGAAACGCTGCAAAAGAGCTTACAGAGT 540
QY 541 AACCCGAAATCTCTCTGAGAAACAGTCTCAGTGTCAACTCTTAACCTTGGAA 600
Db 541 AACCCGAAATCTCTCTGAGAAACAGTCTCAGTGTCAACTCTTAACCTTGGAA 600
QY 601 CTGTGGAAGCTGTGAGAGCAAAAGCAGGATACAACTCAAAAGAGCTGTGTATATG 660
Db 601 CTGTGGAAGCTGTGAGAGCAAAAGCAGGATACAACTCAAAAGAGCTGTGTATATG 660
QY 661 AATGGATCTGATTTCTGAAATACGCTTAATTAAGCAACTTATGAGTGGAG 720
Db 661 AATGGATCTGATTTCTGAAATACGCTTAATTAAGCAACTTATGAGTGGAG 720
QY 721 ATCAAGAATTTGTACAAATCACCCCTCAAGGAACAGGATGAATCAGTTGGATTCTG 780
Db 721 ATCAAGAATTTGTACAAATCACCCCTCAAGGAACAGGATGAATCAGTTGGATTCTG 780
QY 781 CAAAAAGGCTGTGTGATTTTGTGAGAGGATGATACAAATATGTAACATCATCAG 840
Db 781 CAAAAAGGCTGTGTGATTTTGTGAGAGGATGATACAAATATGTAACATCATCAG 840

```


QY 841 CCAATTAATGATTTGAACACCACTGAGAAAGCGTGCAGCTGAGAGCGATCCAGAAAAGT 900
| | | | |
Db 841 CCAATTAATGATTTGAACACCACTGAGAAAGCGTGCAGCTGAGAGCGATCCAGAAAAGT 900
QY 901 ATCAGGAGTATCTGTTTCAAACTTGCATGTGAGCCATGTGGCACAATACTCATGGCA 960
| | | | |
Db 901 ATCAGGAGTATCTGTTTCAAACTTGCATGTGAGCCATGTGGCACAATACTCATGGCA 960
QY 961 GCTCATATACAGCATGAGAACAGCAGTTATATCTACTCTAAAGACAGATGATGATGAAA 1020
| | | | |
Db 961 GCTCATATACAGCATGAGAACAGCAGTTATATCTACTCTAAAGACAGATGATGATGAAA 1020
QY 1021 AGCGTGAATTTCTGTAATTAAGCAACAGCCTGCTTACAGAGAGCCACATTAACAGAT 1080
| | | | |
Db 1021 AGCGTGAATTTCTGTAATTAAGCAACAGCCTGCTTACAGAGAGCCACATTAACAGAT 1080
QY 1081 GGGCTGGAATTAAGCAACATGTAATGATAGCGGAGCTCCAGCACAGAAAAAAGGTAG 1140
| | | | |
Db 1081 GGGCTGGAATTAAGCAACATGTAATGATAGCGGAGCTCCAGCACAGAAAAAAGGTAG 1140
QY 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGGAATAGCAGAACTGCCATGCT 1200
| | | | |
Db 1141 ATCTGAATGCTGATCCCTGTGTGAGAGAAAAAGATGGAATAGCAGAACTGCCATGCT 1200
QY 1201 CAGAGAACTCTAGAGATCTAGAGATGTTCTTGGATTAACACTAATTAAGCAGATTCAGA 1260
| | | | |
Db 1201 CAGAGAACTCTAGAGATCTAGAGATGTTCTTGGATTAACACTAATTAAGCAGATTCAGA 1260
QY 1261 AGTTAATGAGTGGTTTCCAGAGTGTGAACTGTTAGTTGATGATCACAATGATG 1320
| | | | |
Db 1261 AGTTAATGAGTGGTTTCCAGAGTGTGAACTGTTAGTTGATGATCACAATGATG 1320
QY 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGTGATGTAATGAGAGTTCTAATAGGTAGATG 1380
| | | | |
Db 1321 GGGAGTCTGAATCAAAATGCCAAAGTACGTGATGTAATGAGAGTTCTAATAGGTAGATG 1380
QY 1381 AATATTTGCTGTTCTTCAGAGAAATAGACTTACTGCGCAGTGAATCTCATGAGCTTTAA 1440
| | | | |
Db 1381 AATATTTGCTGTTCTTCAGAGAAATAGACTTACTGCGCAGTGAATCTCATGAGCTTTAA 1440
QY 1441 TATGTAAAGTGAAGAGTTCACCTCAATCAGTAGAGATTAATTAAGACAAAATAT 1500
| | | | |
Db 1441 TATGTAAAGTGAAGAGTTCACCTCAATCAGTAGAGATTAATTAAGACAAAATAT 1500
QY 1501 TTGGGAAAACTATCGGAGAGAGCAAGCCTCCCAACTTAAGCATGTAATGAAAAATC 1560
| | | | |
Db 1501 TTGGGAAAACTATCGGAGAGAGCAAGCCTCCCAACTTAAGCATGTAATGAAAAATC 1560
QY 1561 TAATTAATAGAGAGCTTTGTACTGAGCCACAGATTAATTAAGAGAGCTCCCTCACAATA 1620
| | | | |
Db 1561 TAATTAATAGAGAGCTTTGTACTGAGCCACAGATTAATTAAGAGAGCTCCCTCACAATA 1620
QY 1621 AATTTAAAGCTTAAAGAGAGAGCTATCATGAGCTTTCATCTGAGAGATTTTATCAAGAAAG 1680
| | | | |
Db 1621 AATTTAAAGCTTAAAGAGAGAGCTATCATGAGCTTTCATCTGAGAGATTTTATCAAGAAAG 1680
QY 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAACTAACCAAAAGGAGC 1740
| | | | |
Db 1681 CAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAAGGAACTAACCAAAAGGAGC 1740
QY 1741 AGAATGTCAGAGTGAATTTACTAATAGTGTGATGAGATTAATTAAGAGAGCTGATTT 1800
| | | | |
Db 1741 AGAATGTCAGAGTGAATTTACTAATAGTGTGATGAGATTAATTAAGAGAGCTGATTT 1800
QY 1801 CTATTTGAGATGAGAAAAATCTTAACCAATAGATACCTGAAAAAAGAAATCTGCTTCA 1860
| | | | |
Db 1801 CTATTTGAGATGAGAAAAATCTTAACCAATAGATACCTGAAAAAAGAAATCTGCTTCA 1860
QY 1861 AAAGCAAGCTGAACCTTAAGAGAGAGTATTAAGCAATATGAACTGAAATTAATATCC 1920
| | | | |
Db 1861 AAAGCAAGCTGAACCTTAAGAGAGAGTATTAAGCAATATGAACTGAAATTAATATCC 1920
QY 1921 ACAATTTCAAAAGCACTTAAAAAAGAAATAGCTGAGAGAGAGCTTTTACACAGGCAATATC 1980
| | | | |

Db 1921 ACAATTTCAAAAGCACTTAAAAAGAAATAGCTGAGAGAGAGAGCTTTTACACAGGCAATATC 1980
| | | | |
QY 1981 ATGGCTTGAACCTAGTATGATGTAATCTTAACCCCACTTAATTTGATGAAATTCGAAA 2040
| | | | |
Db 1981 ATGGCTTGAACCTAGTATGATGTAATCTTAACCCCACTTAATTTGATGAAATTCGAAA 2040
QY 2041 TTGATAGTTGTTCTAGAGAGTGAAGATTAAGAAAAAAGTACCAACCAATGCCAGTCA 2100
| | | | |
Db 2041 TTGATAGTTGTTCTAGAGAGTGAAGATTAAGAAAAAAGTACCAACCAATGCCAGTCA 2100
QY 2101 GGCACAGCAAAACCTTACACTCATGGAAGTTAAAGAACTGCCAATCTGGAGCCAGAAAGA 2160
| | | | |
Db 2101 GGCACAGCAAAACCTTACACTCATGGAAGTTAAAGAACTGCCAATCTGGAGCCAGAAAGA 2160
QY 2161 GTAACCAAGCCAAATGAACAGACAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
| | | | |
Db 2161 GTAACCAAGCCAAATGAACAGACAGTAAAGACATGACAGTACTTTCCAGAGCTGA 2220
QY 2221 AGTTAACAATGACACTGCTGTTCTTTACTAAGTGTCAAAATACAGTGAACCTTAAGAAAT 2280
| | | | |
Db 2221 AGTTAACAATGACACTGCTGTTCTTTACTAAGTGTCAAAATACAGTGAACCTTAAGAAAT 2280
QY 2281 TTGTCAATCCTAGGCTTCCAGAGAGAAAAAAGAAAGAACTTAAGAACTGAATGATG 2340
| | | | |
Db 2281 TTGTCAATCCTAGGCTTCCAGAGAGAAAAAAGAAAGAACTTAAGAACTGAATGATG 2340
QY 2341 CTAATTAATGCTGAAGACCCCAAGATCTCATGTAATGAGAAAGGTTTCCAAACTG 2400
| | | | |
Db 2341 CTAATTAATGCTGAAGACCCCAAGATCTCATGTAATGAGAAAGGTTTCCAAACTG 2400
QY 2401 AAAGATCTGATAGAGATGACAGTATTTCTATGTTGATGCTGATGATGAGCAGTCAAG 2460
| | | | |
Db 2401 AAAGATCTGATAGAGATGACAGTATTTCTATGTTGATGCTGATGATGAGCAGTCAAG 2460
QY 2461 AAATATCTGCTTACTGGAAGTTAGCACTTAAGGAGAGCAAAACCAAGCAAAATAT 2520
| | | | |
Db 2461 AAATATCTGCTTACTGGAAGTTAGCACTTAAGGAGAGCAAAACCAAGCAAAATAT 2520
QY 2521 GTGTGAGTCACTGTCAGAGCATTTGAAAAACCCCAAGGAGCAATTAATCATGTTTCCAAAG 2580
| | | | |
Db 2521 GTGTGAGTCACTGTCAGAGCATTTGAAAAACCCCAAGGAGCAATTAATCATGTTTCCAAAG 2580
QY 2581 ATTAATAGAAATGACACAGAGGCTTTAAGTATCCATTTGGAGACATGAAGTTAACACAGTIC 2640
| | | | |
Db 2581 ATTAATAGAAATGACACAGAGGCTTTAAGTATCCATTTGGAGACATGAAGTTAACACAGTIC 2640
QY 2641 GGGAAACAGCATGAAATGGAAGAAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT 2700
| | | | |
Db 2641 GGGAAACAGCATGAAATGGAAGAAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT 2700
QY 2701 TCAAGGTTTCAAGCGCCAGTCAATTTGCTGTTTTCAAAATCCAGGAAATGACAGAAAGAG 2760
| | | | |
Db 2701 TCAAGGTTTCAAGCGCCAGTCAATTTGCTGTTTTCAAAATCCAGGAAATGACAGAAAGAG 2760
QY 2761 AATGTCAACATTTCTGTCGCCACTCTGGGCTCTTAAGAAACAAAGTCCAAAAGTCACTT 2820
| | | | |
Db 2761 AATGTCAACATTTCTGTCGCCACTCTGGGCTCTTAAGAAACAAAGTCCAAAAGTCACTT 2820
QY 2821 TTGAATGTGAACAAAGAAAGAAATTAAGGAAAGATGAGTCAATATCAAGCTGATC 2880
| | | | |
Db 2821 TTGAATGTGAACAAAGAAAGAAATTAAGGAAAGATGAGTCAATATCAAGCTGATC 2880
QY 2881 AGACAGTTAATATCACTGACAGGCTTCTGTTGTTGTCAGAAAGATTAAGCCAGTTGATA 2940
| | | | |
Db 2881 AGACAGTTAATATCACTGACAGGCTTCTGTTGTTGTCAGAAAGATTAAGCCAGTTGATA 2940
QY 2941 ATGCCAAATGATGATCAAAAGAGAGGCTCTAGGTTTGTCTATCATCATCAGTTCAAGAGCA 3000
| | | | |
Db 2941 ATGCCAAATGATGATCAAAAGAGAGGCTCTAGGTTTGTCTATCATCATCAGTTCAAGAGCA 3000
QY 3001 ACGAAACTGAGCTCATTTACTTCCAAATTAACATGAGACTTTTCAAAACCCATATCTGATAC 3060
| | | | |

```

Db 3001 AGAAGCTGACTACTTCCCAATTAACATGACCTTTACAAAACCATATCTATAC 3060
Qy 3061 CACCACTTTCCCAAGCATTTGTTAAACTAAATGTAAGAAAATCTGCTAGAG 3120
Db 3061 CACCACTTTCCCAAGCATTTGTTAAACTAAATGTAAGAAAATCTGCTAGAG 3120
Qy 3121 AAACTTGAGAACATTCATGTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3180
Db 3121 AAACTTGAGAACATTCATGTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3180
Qy 3181 GTACAGTGAACAATTAACCGTAAATAGAGAAATGTTTTTAAAGAGCAGCT 3240
Db 3181 GTACAGTGAACAATTAACCGTAAATAGAGAAATGTTTTTAAAGAGCAGCT 3240
Qy 3241 CAAGCAATTAATTAAGTTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3300
Db 3241 CAAGCAATTAATTAAGTTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3300
Qy 3301 TAGGTTCCAGTGAAGAAATTCAGAGCAACTAGTAGAAACAGAGGGCCAAATTA 3360
Db 3301 TAGGTTCCAGTGAAGAAATTCAGAGCAACTAGTAGAAACAGAGGGCCAAATTA 3360
Qy 3361 ATGCTATGCTTAGATAGAGGGTTTGCACCTGAGGCTTAATACAAAGTCTTCTG 3420
Db 3361 ATGCTATGCTTAGATAGAGGGTTTGCACCTGAGGCTTAATACAAAGTCTTCTG 3420
Qy 3421 GTAATTGTAGATCCTGAATTAAGAAAGCAAGATAGAGAACTAGTCAAGTGA 3480
Db 3421 GTAATTGTAGATCCTGAATTAAGAAAGCAAGATAGAGAACTAGTCAAGTGA 3480
Qy 3481 ATACAGATTTCTCCATATCTGATTTGATTAAGAACTAGTCAAGTGAAGTATG 3540
Db 3481 ATACAGATTTCTCCATATCTGATTTGATTAAGAACTAGTCAAGTGAAGTATG 3540
Qy 3541 ATGCTATGCTTAGATAGAGGGTTTGCACCTGAGGCTTAATACAAAGTCTTCTG 3600
Db 3541 ATGCTATGCTTAGATAGAGGGTTTGCACCTGAGGCTTAATACAAAGTCTTCTG 3600
Qy 3601 AAGACTAGTTCCTGAATTAAGAAAGCAAGATAGAGAACTAGTCAAGTGAAG 3660
Db 3601 AAGACTAGTTCCTGAATTAAGAAAGCAAGATAGAGAACTAGTCAAGTGAAG 3660
Qy 3661 TCCAGAAAGAGAGCTTAGCAGAGAGTCTAGCCCTTACACCATACACATTTGG 3720
Db 3661 TCCAGAAAGAGAGCTTAGCAGAGAGTCTAGCCCTTACACCATACACATTTGG 3720
Qy 3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGTGA 3780
Db 3721 GTTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAAAGAACTTATCTAGTGA 3780
Qy 3781 AAGAGCTCCCTGCTCCACACCTGTTATTGTAAGTAAACAAATTAACCTTCT 3840
Db 3781 AAGAGCTCCCTGCTCCACACCTGTTATTGTAAGTAAACAAATTAACCTTCT 3840
Qy 3841 CTACTAGGCAATAGCAGCGTGTCTACCGAGTCTGTCTAAGAACACAGAGAG 3900
Db 3841 CTACTAGGCAATAGCAGCGTGTCTACCGAGTCTGTCTAAGAACACAGAGAG 3900
Qy 3901 TATATGGAAGAAATTAAGTTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3960
Db 3901 TATATGGAAGAAATTAAGTTCACCTGAAAGAAATGGGAATGAGAACATTCGA 3960
Qy 3961 AGAAGCAATCACCCTTAGTGAAGAAACAAATGTTGCTGAGTGTGTTCTTCTG 4020
Db 3961 AGAAGCAATCACCCTTAGTGAAGAAACAAATGTTGCTGAGTGTGTTCTTCTG 4020
Qy 4021 GTGAATTGGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4080
Db 4021 GTGAATTGGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4080
Qy 4081 CCAAGCAATGAGGCAATGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4140
Db 4081 CCAAGCAATGAGGCAATGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4140
Qy 4141 TTTGATGATGAAGAAAGAGGAGGCTTGGAAAGAAATATATCAAGAGCAAGCA 4200
Db 4141 TTTGATGATGAAGAAAGAGGAGGCTTGGAAAGAAATATATCAAGAGCAAGCA 4200
Qy 4201 TGGATTAACCTTAGTGAAGAGCATCTGGGTGAGAGTGAAGAAACAGGCTCTG 4260
Db 4201 TGGATTAACCTTAGTGAAGAGCATCTGGGTGAGAGTGAAGAAACAGGCTCTG 4260
Qy 4261 ACTGCTAAGGCTATCTCTGAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4320
Db 4261 ACTGCTAAGGCTATCTCTGAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4320
Qy 4321 AACATTAACCTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4380
Db 4321 AACATTAACCTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4380
Qy 4381 ATGGAGGCAAGCTTCTAAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4440
Db 4381 ATGGAGGCAAGCTTCTAAGAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4440
Qy 4441 ACTGCGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4500
Db 4441 ACTGCGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4500
Qy 4501 GTGAATACCTTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4560
Db 4501 GTGAATACCTTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4560
Qy 4561 CAGATAGTTCACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4620
Db 4561 CAGATAGTTCACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4620
Qy 4621 GGCATCATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4680
Db 4621 GGCATCATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAG 4680
Qy 4681 ACTACCATTCACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4740
Db 4681 ACTACCATTCACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4740
Qy 4741 AGTCTGGGCAACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4800
Db 4741 AGTCTGGGCAACAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4800
Qy 4801 CCCCTTACCTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4860
Db 4801 CCCCTTACCTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4860
Qy 4861 AAGACAGAGCCCAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4920
Db 4861 AAGACAGAGCCCAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4920
Qy 4921 AAGTCCCAATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4980
Db 4921 AAGTCCCAATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 4980
Qy 4981 ATACTGCTGGGTATATCAATGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 5040
Db 4981 ATACTGCTGGGTATATCAATGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGA 5040
Qy 5041 CTTCAACAGAAAGGCTCAACAAAGAAATGTCATGCTGCTGCTGCTGCTGCTG 5100
Db 5041 CTTCAACAGAAAGGCTCAACAAAGAAATGTCATGCTGCTGCTGCTGCTGCTG 5100
Qy 5101 AATTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 5160
Db 5101 AATTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 5160
Qy 5161 CTGAAGAGTACATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 5220
Db 5161 CTGAAGAGTACATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 5220

```

```
QY 5221 TGAATATTTCTAGGAATTCGGGAGGAAAAATGGGTAGTATTTCTGGGTGACCC 5280
    |||||||
Db 5221 TGAATATTTCTAGGAATTCGGGAGGAAAAATGGGTAGTATTTCTGGGTGACCC 5280
QY 5281 AGTCTATTAAGAAAGAAAAATGCTGATGACCATGATTTTGAAGTCAGAGAGATGTGG 5340
    |||||||
Db 5281 AGTCTATTAAGAAAGAAAAATGCTGATGACCATGATTTTGAAGTCAGAGAGATGTGG 5340
QY 5341 TCAATGGAAGAAACCAAGGTCCAAAAGCAGAGAGATCCAGAGAGAAAGATCT 5400
    |||||||
Db 5341 TCAATGGAAGAAACCAAGGTCCAAAAGCAGAGAGATCCAGAGAGAAAGATCT 5400
QY 5401 TCAGGGGCTAGAAATCTGTGCTATGGGCCCTTCACCAACATGCCACAGATCAACTGG 5460
    |||||||
Db 5401 TCAGGGGCTAGAAATCTGTGCTATGGGCCCTTCACCAACATGCCACAGATCAACTGG 5460
QY 5461 AATGATGTTACAGCTGTGCTCTGTGTGTAAGAGCTTTCATTCATCACCCTTG 5520
    |||||||
Db 5461 AATGATGTTACAGCTGTGCTCTGTGTGTAAGAGCTTTCATTCATCACCCTTG 5520
QY 5521 GCACAGGTGTCACCCCAATTTGTTGTGACAGCCAGATGCTGACAGAGACAATGGCT 5580
    |||||||
Db 5521 GCACAGGTGTCACCCCAATTTGTTGTGACAGCCAGATGCTGACAGAGACAATGGCT 5580
QY 5581 TCCATGCAATTTGGGAGATGTGTGAGGCACTGTGTGACCCGAGAGTGGTGTGGACA 5640
    |||||||
Db 5581 TCCATGCAATTTGGGAGATGTGTGAGGCACTGTGTGACCCGAGAGTGGTGTGGACA 5640
QY 5641 GTGTAGCACTCTACAGTGCAGAGCTGAGACACTTACCTGATACCCGATCCGCCACA 5700
    |||||||
Db 5641 GTGTAGCACTCTACAGTGCAGAGCTGAGACACTTACCTGATACCCGATCCGCCACA 5700
QY 5701 GCCACTACTGA 5711
    |||||||
Db 5701 GCCACTACTGA 5711
```

Search completed: June 27, 2003, 20:52:43
Job time : 289.42 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 27, 2003, 17:32:05 ; Search time 41 Seconds
(without alignments)
1503.464 Million cell updates/sec

Title: US-09-734-672-3_COPY_2100_2300
Perfect score: 201
Sequence: 1 AGGCACAGCAGAACTACA.....TTGTCACTCTAGCTTCA 201

Scoring table: OLIGO_NUC
Gapop 60.0 , Gapext 60.0

Searched: 441362 seqs, 15338381 residues

Word size: 0

Total number of hits satisfying chosen parameters: 882724

Minimum DB seq length: 0
Maximum DB seq length: 200000000

Post-processing: Listing first 45 summaries

Database:

Issued_Patents_MA:*
1: /cgn2_6/ptodata/2/ina/5A.COMB.seq:*
2: /cgn2_6/ptodata/2/ina/5B.COMB.seq:*
3: /cgn2_6/ptodata/2/ina/6A.COMB.seq:*
4: /cgn2_6/ptodata/2/ina/6B.COMB.seq:*
5: /cgn2_6/ptodata/2/ina/PTCUS.COMB.seq:*
6: /cgn2_6/ptodata/2/ina/backfile1.seq:*

Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	201	100.0	5711	1 US-08-598-591-1	Sequence 1, Appl
2	201	100.0	5711	1 US-08-798-691-1	Sequence 1, Appl
3	201	100.0	5711	1 US-08-798-691-5	Sequence 5, Appl
4	201	100.0	5711	3 US-08-825-487A-1	Sequence 1, Appl
5	201	100.0	5711	3 US-08-825-487A-5	Sequence 5, Appl
6	201	100.0	5711	3 US-09-074-476-1	Sequence 1, Appl
7	201	100.0	5711	3 US-09-074-476-3	Sequence 3, Appl
8	150	74.6	4249	1 US-08-480-784-21	Sequence 21, Appl
9	150	74.6	4249	1 US-08-483-553-21	Sequence 21, Appl
10	150	74.6	4249	1 US-08-487-002-21	Sequence 21, Appl
11	150	74.6	4249	1 US-08-483-554B-21	Sequence 21, Appl
12	150	74.6	4249	1 US-08-488-011B-21	Sequence 21, Appl
13	150	74.6	4249	4 US-08-850-127-21	Sequence 21, Appl
14	150	74.6	4249	5 PCT-US95-10203-21	Sequence 21, Appl
15	150	74.6	4249	5 PCT-US95-10203-21	Sequence 21, Appl
16	150	74.6	4249	5 PCT-US95-10220-21	Sequence 21, Appl
17	150	74.6	5656	1 US-08-425-061-1	Sequence 1, Appl
18	150	74.6	5656	1 US-08-825-886-1	Sequence 1, Appl
19	150	74.6	5689	1 US-08-425-061-3	Sequence 3, Appl
20	150	74.6	5707	1 US-08-825-886-3	Sequence 3, Appl
21	150	74.6	5707	1 US-08-425-061-11	Sequence 11, Appl
22	150	74.6	5709	1 US-08-825-886-11	Sequence 11, Appl
23	150	74.6	5709	1 US-08-425-061-2	Sequence 2, Appl
24	150	74.6	5709	1 US-08-425-061-7	Sequence 7, Appl
25	150	74.6	5709	1 US-08-425-061-8	Sequence 8, Appl
26	150	74.6	5709	1 US-08-425-061-9	Sequence 9, Appl
27	150	74.6	5709	1 US-08-825-886-2	Sequence 2, Appl

28	150	74.6	5709	1 US-08-825-886-7	Sequence 7, Appl
29	150	74.6	5709	1 US-08-825-886-8	Sequence 8, Appl
30	150	74.6	5709	1 US-08-825-886-9	Sequence 9, Appl
31	150	74.6	5710	1 US-08-425-061-6	Sequence 6, Appl
32	150	74.6	5711	1 US-08-825-886-6	Sequence 6, Appl
33	150	74.6	5711	1 US-08-425-061-4	Sequence 4, Appl
34	150	74.6	5711	1 US-08-425-061-10	Sequence 10, Appl
35	150	74.6	5711	1 US-08-798-691-3	Sequence 3, Appl
36	150	74.6	5711	1 US-08-825-886-4	Sequence 4, Appl
37	150	74.6	5711	1 US-08-825-886-10	Sequence 10, Appl
38	150	74.6	5711	2 US-08-658-322-1	Sequence 1, Appl
39	150	74.6	5711	3 US-08-825-487A-3	Sequence 3, Appl
40	150	74.6	5711	3 US-09-074-476-5	Sequence 5, Appl
41	150	74.6	5712	1 US-08-425-061-12	Sequence 12, Appl
42	150	74.6	5712	1 US-08-825-886-12	Sequence 12, Appl
43	150	74.6	5712	2 US-08-603-753D-1	Sequence 1, Appl
44	150	74.6	5712	3 US-09-099-753-1	Sequence 1, Appl
45	150	74.6	5712	4 US-08-986-106-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
US-08-598-591-1
Sequence 1, Application US/08598591
Patent No. 5654155
GENERAL INFORMATION:
APPLICANT: Allen, Antonette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Murphy, Patricia D.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
TITLE OF INVENTION: A Consensus Sequence of the Human BRCA1 Gene
Patent No. 5654155
NUMBER OF SEQUENCES: 74
CORRESPONDENCE ADDRESS:
ADDRESSEE: BURNS, DOANE, SWECKER & MATHIS
STREET: 699 Prince St.
CITY: Alexandria
STATE: VA
COUNTRY: USA
ZIP: 22314
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/598,591
FILING DATE: herewith
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Swecker, Robert S.
REGISTRATION NUMBER: 15,885
REFERENCE/DOCKET NUMBER: 020160-282
TELECOMMUNICATION INFORMATION:
TELEPHONE: 703-836-6620
TELEFAX: 703-836-2021
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17

MAP POSITION: 17q21
US-08-598-591-1

Query Match 100.0%; Score 201; DB 1; Length 5711;
Best Local Similarity 100.0%; Pred. No. 1.5e-95;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 AGGCACAGCAGAAACCTACACATCATGGAAGTAAAGAACTGCAACTGGAGCCAAAG 60
DB 2100 AGGCACAGCAGAAACCTACACATCATGGAAGTAAAGAACTGCAACTGGAGCCAAAG 2159
OY 61 AGTACAGCCAAATGACAGACAGCAAGTAAAGACATGACATGATCTTCCAGAGCTG 120
DB 2160 AGTACAGCCAAATGACAGACAGCAAGTAAAGACATGACATGATCTTCCAGAGCTG 2219
OY 121 AAGTTACAAATGACAGCTGGTCTTTACTAAGTGTCAATACCAAGTGAAGTAAAGAA 180
DB 2220 AAGTTACAAATGACAGCTGGTCTTTACTAAGTGTCAATACCAAGTGAAGTAAAGAA 2279
OY 181 TTGTCAATCCTACCTTCCA 201
DB 2280 TTGTCAATCCTACCTTCCA 2300

RESULT 2

US-08-798-691-1
Sequence 1, Application US/08798691
Patent No. 5750400

GENERAL INFORMATION:

APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
TITLE OF INVENTION: Coding Sequences of the Human
TITLE OF INVENTION: BRCAL Gene
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: ONCORMED
STREET: 200 Perry Parkway
CITY: Galthersberg
STATE: MD
COUNTRY: USA
ZIP: 20877

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Thomas Gallegos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL
POSITION IN GENOME:

CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-798-691-1

Query Match 100.0%; Score 201; DB 1; Length 5711;
Best Local Similarity 100.0%; Pred. No. 1.5e-95;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

OY 1 AGGCACAGCAGAAACCTACACATCATGGAAGTAAAGAACTGCAACTGGAGCCAAAG 60
DB 2100 AGGCACAGCAGAAACCTACACATCATGGAAGTAAAGAACTGCAACTGGAGCCAAAG 2159
OY 61 AGTACAGCCAAATGACAGACAGCAAGTAAAGACATGACATGATCTTCCAGAGCTG 120
DB 2160 AGTACAGCCAAATGACAGACAGCAAGTAAAGACATGACATGATCTTCCAGAGCTG 2219
OY 121 AAGTTACAAATGACAGCTGGTCTTTACTAAGTGTCAATACCAAGTGAAGTAAAGAA 180
DB 2220 AAGTTACAAATGACAGCTGGTCTTTACTAAGTGTCAATACCAAGTGAAGTAAAGAA 2279
OY 181 TTGTCAATCCTACCTTCCA 201
DB 2280 TTGTCAATCCTACCTTCCA 2300

RESULT 3

US-08-798-691-5
Sequence 5, Application US/08798691
Patent No. 5750400

GENERAL INFORMATION:

APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
TITLE OF INVENTION: Coding Sequences of the Human
TITLE OF INVENTION: BRCAL Gene
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: ONCORMED
STREET: 200 Perry Parkway
CITY: Galthersberg
STATE: MD
COUNTRY: USA
ZIP: 20877

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:

NAME: Thomas Gallegos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054CIP
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997

INFORMATION FOR SEQ ID NO: 5:

SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL

POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-798-691-5

Query Match 100.0%; Score 201; DB 1; Length 5711;
Best Local Similarity 100.0%; Pred. No. 1.5e-95;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AGGCACACGAGAACTTCACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 60
DB 2100 AGGCACACGAGAACTTCACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 2159
QY 61 AGTACAGCCAAATGAGACAGAGTAAGAACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 120
DB 2160 AGTACAGCCAAATGAGACAGAGTAAGAACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 2219
QY 121 AAGTTAACAAATGACACCTGCTTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 180
DB 2220 AAGTTAACAAATGACACCTGCTTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 2279
QY 181 TTGTGCATCCTAGCCTTCCA 201
DB 2280 TTGTGCATCCTAGCCTTCCA 2300

RESULT 4

US-08-825-487A-1
Sequence 1, Application US/08825487A
Patent No. 6048689

GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
TITLE OF INVENTION: METHODS FOR IDENTIFYING VARIATIONS IN POLYNUCLEOTIDE SEQUENCE
NUMBER OF SEQUENCES: 110
CORRESPONDENCE ADDRESS:
ADDRESSEE: Howrey & Simon
STREET: 1299 Pennsylvania Avenue., N.W.
CITY: Washington,
STATE: DC
COUNTRY: USA
ZIP: 20004

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/825,487A
FILING DATE: 28-MAR-1997
CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US98/060002
FILING DATE: 26-Mar-1998
CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: Albert P. Halluin
REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: 05371.0012.999

TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-463-8100
TELEFAX: 650-463-8400

INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear

MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL

POSITION IN GENOME:

CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-08-825-487A-1

Query Match 100.0%; Score 201; DB 3; Length 5711;
Best Local Similarity 100.0%; Pred. No. 1.5e-95;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AGGCACACGAGAACTTCACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 60
DB 2100 AGGCACACGAGAACTTCACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 2159
QY 61 AGTACAGCCAAATGAGACAGAGTAAGAACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 120
DB 2160 AGTACAGCCAAATGAGACAGAGTAAGAACTGAGAGGTAAGAACTGCACTGAGAGCCAAAG 2219
QY 121 AAGTTAACAAATGACACCTGCTTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 180
DB 2220 AAGTTAACAAATGACACCTGCTTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 2279
QY 181 TTGTGCATCCTAGCCTTCCA 201
DB 2280 TTGTGCATCCTAGCCTTCCA 2300

RESULT 5

US-08-825-487A-5
Sequence 5, Application US/08825487A
Patent No. 6048689

GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
TITLE OF INVENTION: METHODS FOR IDENTIFYING VARIATIONS IN POLYNUCLEOTIDE SEQUE
NUMBER OF SEQUENCES: 110
CORRESPONDENCE ADDRESS:
ADDRESSEE: Howrey & Simon
STREET: 1299 Pennsylvania Avenue., N.W.
CITY: Washington,
STATE: DC
COUNTRY: USA
ZIP: 20004

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/825,487A
FILING DATE: 28-MAR-1997
CLASSIFICATION: 435

PRIOR APPLICATION DATA:
APPLICATION NUMBER: PCT/US98/060002
FILING DATE: 26-Mar-1998
CLASSIFICATION: 435

ATTORNEY/AGENT INFORMATION:
NAME: Albert P. Halluin
REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: 05371.0012.999

TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-463-8100
TELEFAX: 650-463-8400

INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear

MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL

POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17

MAP POSITION: 17q21
US-08-825-487A-5

Query Match
Best Local Similarity 100.0%; Score 201; DB 3; Length 5711;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTCATGAGTAAGAACTGCACTGAGCCAGAAG 60
DB 2100 AGGCACAGCAGAACTCATGAGTAAGAACTGCACTGAGCCAGAAG 2159
QY 61 AGTACACAGCCAAATGAAACAGACATGACAGTGAATCTTCCAGACTG 120
DB 2160 AGTACACAGCCAAATGAAACAGACATGACAGTGAATCTTCCAGACTG 2219
QY 121 AGTTAACAAATGACACCTGGTCTTTACTAAGTGTCAAAATACCACTTAAGAA 180
DB 2220 AGTTAACAAATGACACCTGGTCTTTACTAAGTGTCAAAATACCACTTAAGAA 2279
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 2280 TTGTCAATCCTAGCCTTCCA 2300

RESULT 6

US-09-074-476-1
Sequence 1, Application US/09074476
Patent No. 6130322

GENERAL INFORMATION:

APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antoinette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Thurber, Denise
APPLICANT: Zeng, Bin
TITLE OF INVENTION: Coding Sequences of the Human
TITLE OF INVENTION: BRCA1 Gene
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: Howrey & Simon
STREET: 1299 Pennsylvania Avenue N. W.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20004

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074.476
FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/074.453

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Albert P. Halluin

REGISTRATION NUMBER: 25,227

REFERENCE/DOCKET NUMBER: 5371.34.US01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 650-463-8109

TELEFAX: 650-463-8400

INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 5711 base pairs

TYPE: nucleic acid

STRANDEDNESS: not relevant

TOPOLOGY: linear

MOLECULE TYPE: cDNA

ORIGINAL SOURCE:

ORGANISM: Homo sapiens
STRAIN: BRCA1 (om11)
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-09-074-476-1

Query Match
Best Local Similarity 100.0%; Score 201; DB 3; Length 5711;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTCATGAGTAAGAACTGCACTGAGCCAGAAG 60
DB 2100 AGGCACAGCAGAACTCATGAGTAAGAACTGCACTGAGCCAGAAG 2159
QY 61 AGTACACAGCCAAATGAAACAGACATGACAGTGAATCTTCCAGACTG 120
DB 2160 AGTACACAGCCAAATGAAACAGACATGACAGTGAATCTTCCAGACTG 2219
QY 121 AGTTAACAAATGACACCTGGTCTTTACTAAGTGTCAAAATACCACTTAAGAA 180
DB 2220 AGTTAACAAATGACACCTGGTCTTTACTAAGTGTCAAAATACCACTTAAGAA 2279
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 2280 TTGTCAATCCTAGCCTTCCA 2300

RESULT 7

US-09-074-476-3
Sequence 3, Application US/09074476
Patent No. 6130322

GENERAL INFORMATION:

APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antoinette C.
APPLICANT: Alvares, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Thurber, Denise
APPLICANT: Zeng, Bin
TITLE OF INVENTION: Coding Sequences of the Human
TITLE OF INVENTION: BRCA1 Gene
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: Howrey & Simon
STREET: 1299 Pennsylvania Avenue N. W.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20004

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074.476
FILING DATE:

CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: 09/074.453

FILING DATE:

ATTORNEY/AGENT INFORMATION:

NAME: Albert P. Halluin

REGISTRATION NUMBER: 25,227

REFERENCE/DOCKET NUMBER: 5371.34.US01

TELECOMMUNICATION INFORMATION:

TELEPHONE: 650-463-8109

TELEFAX: 650-463-8400

INFORMATION FOR SEQ ID NO: 3:

SEQUENCE CHARACTERISTICS:

LENGTH: 5711 base pairs

TYPE: nucleic acid

STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCA1 (om12)
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-09-074-476-3

Query Match
Best Local Similarity 100.0%; Score 201; DB 3; Length 5711;
Pred. No. 1.5e-95;
Matches 201; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 AGGCACAGCAAACTCTACACTCTGAGAGTAAAGACCTGCACTGAGCCAGAG 60
DB 2100 AGGCACAGCAAACTCTACACTCTGAGAGTAAAGACCTGCACTGAGCCAGAG 2159
QY 61 AGTACAGCCAAATGAGACAGAGTAAAGACATGACATGATCTTCCAGAGCTG 120
DB 2160 AGTACAGCCAAATGAGACAGAGTAAAGACATGACATGATCTTCCAGAGCTG 2219
QY 121 AAGTTAACAAATGACACCTGGTCTTTTACTAGTGTCAATATCCAGTGAATTAAGA 180
DB 2220 AAGTTAACAAATGACACCTGGTCTTTTACTAGTGTCAATATCCAGTGAATTAAGA 2279
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 2280 TTGTCAATCCTAGCCTTCCA 2300

RESULT 8

US-08-480-784-21
Sequence 21, Application US/08480784
Patent No. 5693473
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/480,784
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Innen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-480-784-21

Query Match
Best Local Similarity 74.6%; Score 150; DB 1; Length 4249;
Pred. No. 5.1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGGCACAGCAAACTCTACACTCTGAGAGTAAAGACCTGCACTGAGCCAGAG 60
DB 1512 AGGCACAGCAAACTCTACACTCTGAGAGTAAAGACCTGCACTGAGCCAGAG 1571
QY 61 AGTACAGCCAAATGAGACAGAGTAAAGACATGACATGATCTTCCAGAGCTG 120
DB 1572 AGTACAGCCAAATGAGACAGAGTAAAGACATGACATGATCTTCCAGAGCTG 1631
QY 121 AAGTTAACAAATGACACCTGGTCTTTTACTAGTGTCAATATCCAGTGAATTAAGA 180
DB 1632 AAGTTAACAAATGACACCTGGTCTTTTACTAGTGTCAATATCCAGTGAATTAAGA 1691
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 1692 TTGTCAATCCTAGCCTTCCA 1712

RESULT 9

US-08-483-553-21
Sequence 21, Application US/08483553
Patent No. 5709999
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA

ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,553
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-483-553-21

Query Match 74.6%; Score 150; DB 1; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5.1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTTCACTGAGAGGTAAGAAGCTGCACTGGAGCCAGAG 60
DB 1512 AGGCACAGCAGAACTTCACTGAGAGGTAAGAAGCTGCACTGGAGCCAGAG 1571
QY 61 AGTAACAAGCCAAATGAGACAGACAGTAAGAGACATGACAGTCTTCCAGAGCTG 120
DB 1572 AGTAACAAGCCAAATGAGACAGACAGTAAGAGACATGACAGTCTTCCAGAGCTG 1631
QY 121 AAGTTACAATGACACCTGGTTCTTTACTAAGTGTTCAAATACAGAGTAAGAA 180
DB 1632 AAGTTACAATGACACCTGGTTCTTTACTAAGTGTTCAAATACAGAGTAAGAA 1691
QY 181 TTGTCAATCTTACCTTCCA 201
DB 1692 TTGTCAATCTTACCTTCCA 1712

RESULT 10
US-08-487-002-21
Sequence 21, Application US/08487002
Patent No. 5710001
GENERAL INFORMATION:
APPLICANT: Shettuck-Eidens, Donna M.
APPLICANT: Simard, Jacques

APPLICANT: Eml, Mitsuru
APPLICANT: Nakamura, Yusuke
APPLICANT: Durocher, Francine
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/487,002
FILING DATE:
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-487-002-21

Query Match 74.6%; Score 150; DB 1; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5.1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTTCACTGAGAGGTAAGAAGCTGCACTGGAGCCAGAG 60
DB 1512 AGGCACAGCAGAACTTCACTGAGAGGTAAGAAGCTGCACTGGAGCCAGAG 1571
QY 61 AGTAACAAGCCAAATGAGACAGACAGTAAGAGACATGACAGTCTTCCAGAGCTG 120
DB 1572 AGTAACAAGCCAAATGAGACAGACAGTAAGAGACATGACAGTCTTCCAGAGCTG 1631
QY 121 AAGTTACAATGACACCTGGTTCTTTACTAAGTGTTCAAATACAGAGTAAGAA 180
DB 1632 AAGTTACAATGACACCTGGTTCTTTACTAAGTGTTCAAATACAGAGTAAGAA 1691

OY 181 TTGTCAATCCTAGCCTTCCA 201
Db 1692 TTGTCAATCCTAGCCTTCCA 1712

RESULT 11
US-08-483-554B-21
Sequence 21, Application US/08483554B
Patent No. 5747282
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shatluck-Eldens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,554B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-483-554B-21

Query Match 74.6%; Score 150; DB 1; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5,1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

OY 1 AGGCACAGCAGAACTTACACTGTAAGGTAAAGCACTGCACCTGAGCAGCAAG 60
Db 1512 AGGCACAGCAGAACTTACACTGTAAGGTAAAGCACTGCACCTGAGCAGCAAG 1571
OY 61 AGTAACAGCCAAATGACAGACAGTAAGACATGACAGTATCTTCCAGAGCTG 120
Db 1572 AGTAACAGCCAAATGACAGACAGTAAGACATGACAGTATCTTCCAGAGCTG 1631
OY 121 AAGTTAACAAATGACAGCTGCTTTTACTAGTGTCTCAATACAGTAACCTTAAGAA 180
Db 1632 AAGTTAACAAATGACAGCTGCTTTTACTAGTGTCTCAATACAGTAACCTTAAGAA 1691
OY 181 TTGTCAATCCTAGCCTTCCA 201
Db 1692 TTGTCAATCCTAGCCTTCCA 1712

RESULT 12
US-08-488-011B-21
Sequence 21, Application US/08488011B
Patent No. 5753441
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shatluck-Eldens, Donna M.
APPLICANT: Tavligian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,011B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.

REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347-09
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-488-011B-21

Query Match 74.6%; Score 150; DB 1; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5.1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTACACTCATGTGAAGTAAAGACCTGCACAGCCAGCAAG 60
DB 1512 AGGCACAGCAGAACTACACTCATGTGAAGTAAAGACCTGCACAGCCAGCAAG 1571
QY 61 AGTAAACAGCCAAATGAGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 120
DB 1572 AGTAAACAGCCAAATGAGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 1631
QY 121 AAGTTACAATGACAGCTGGTCTTTTACTAAGTGTCAATACAGAGACTTAAAGAA 180
DB 1632 AAGTTACAATGACAGCTGGTCTTTTACTAAGTGTCAATACAGAGACTTAAAGAA 1691
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 1692 TTGTCAATCCTAGCCTTCCA 1712

RESULT 13

US-08-850-727-21
Sequence 21, Application US/08850727

GENERAL INFORMATION:

APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamb, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavitglan, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/850,727
FILING DATE:
CLASSIFICATION:

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/483,554
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
US-08-850-727-21

Query Match 74.6%; Score 150; DB 4; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5.1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 AGGCACAGCAGAACTACACTCATGTGAAGTAAAGACCTGCACAGCCAGCAAG 60
DB 1512 AGGCACAGCAGAACTACACTCATGTGAAGTAAAGACCTGCACAGCCAGCAAG 1571
QY 61 AGTAAACAGCCAAATGAGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 120
DB 1572 AGTAAACAGCCAAATGAGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 1631
QY 121 AAGTTACAATGACAGCTGGTCTTTTACTAAGTGTCAATACAGAGACTTAAAGAA 180
DB 1632 AAGTTACAATGACAGCTGGTCTTTTACTAAGTGTCAATACAGAGACTTAAAGAA 1691
QY 181 TTGTCAATCCTAGCCTTCCA 201
DB 1692 TTGTCAATCCTAGCCTTCCA 1712

RESULT 14

PCT-US95-10202-21
Sequence 21, Application PC/TUS9510202

GENERAL INFORMATION:

APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Simard, Jacques
APPLICANT: Eml, Mitsuru
APPLICANT: Nakamura, Yusuke
APPLICANT: Durocher, Francine
TITLE OF INVENTION: In vivo Mutations and Polymorphisms
TITLE OF INVENTION: in the 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington

STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10202
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08-308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
PCT-US95-10202-21

Query Match 74.6%; Score 150; DB 5; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5,1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 AGGCACAGCAAACTACATGAGTAAAGACCTGCACTGGAGCCAAAG 60
Db 1512 AGGCACAGCAAACTACATGAGTAAAGACCTGCACTGGAGCCAAAG 1571
QY 61 AGTACAGCCAAATGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 120
Db 1572 AGTACAGCCAAATGACAGACAGTAAAGACATGACAGTACTTCCAGAGCTG 1631
QY 121 AAGTACAAATGACCTGTTCTTTACTAAGTGTCAATACAGTGAACCTTAAGAA 180
Db 1632 AAGTACAAATGACCTGTTCTTTACTAAGTGTCAATACAGTGAACCTTAAGAA 1691
QY 181 TTGTCAATCTAGCCTTCCA 201
Db 1692 TTGTCAATCTAGCCTTCCA 1712
RESULT 15
PCT-US95-10203-21

Sequence 21, Application PC/TUS9510203
GENERAL INFORMATION:
APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamp, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavtligian, Sean V.
APPLICANT: Wiseman, Roger W.
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10203
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08-308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-8300
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 21:
SEQUENCE CHARACTERISTICS:
LENGTH: 4249 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: DNA (genomic)
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
PCT-US95-10203-21
Query Match 74.6%; Score 150; DB 5; Length 4249;
Best Local Similarity 99.5%; Pred. No. 5,1e-69;
Matches 200; Conservative 0; Mismatches 1; Indels 0; Gaps 0;


```
OY      1 AGGCACAGCAGAAACCTACAACTCATGGAAGGTAAAGAACTGCAACTGAGGCCAAGAAG 60
      |||
Db      1512 AGGCACAGCAGAAACCTACAACTCATGGAAGGTAAAGAACTGCAACTGAGGCCAAGAAG 1571
      |||
OY      61 AGTAACAAGCCAAATGAAACAGACAGTAAAGACATGACAGTGATCTTCCAGAGCTG 120
      |||
Db      1572 AGTAACAAGCCAAATGAAACAGACAGTAAAGACATGACAGTGATCTTCCAGAGCTG 1631
      |||
OY      121 AAGTTACAATAATGACCTGCTTTCTTACTAAGTGTCAATAATACCAGTGAAGTTAAGAA 180
      |||
Db      1632 AAGTTACAATAATGACCTGCTTTCTTACTAAGTGTCAATAATACCAGTGAAGTTAAGAA 1691
      |||
OY      181 TTTGTCAATCCTAGCCTTCCA 201
      |||
Db      1692 TTTGTCAATCCTAGCCTTCCA 1712
      |||
```

Search completed: June 27, 2003, 20:53:21
Job time : 41 secs

GenCore version 5.1.6
Copyright (c) 1993 - 2003 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: June 27, 2003, 17:30:39 ; Search time 267.58 Seconds

(without alignments)
6405.633 Million cell updates/sec

Title: US-09-734-672-3_COPY_120_5708

Perfect score: 5589

Sequence: 1 ATGATTTATCTGCTCTCG.....AGATCCCCACAGCAGCTAC 5589

Scoring table: IDENTITY_NUC

Gapop 10.0 , Gapext 1.0

Searched: 441362 seqs, 153338381 residues

Total number of hits satisfying chosen parameters: 882724

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued_Patents_NA.*

1: /cgn2_6/ptodata/2/ina/5A.COMB.seq.*

2: /cgn2_6/ptodata/2/ina/5B.COMB.seq.*

3: /cgn2_6/ptodata/2/ina/6A.COMB.seq.*

4: /cgn2_6/ptodata/2/ina/6B.COMB.seq.*

5: /cgn2_6/ptodata/2/ina/PC105.COMB.seq.*

6: /cgn2_6/ptodata/2/ina/backfill1.seq.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	5587.4	100.0	5711	1	US-08-798-691-3
2	5587.4	100.0	5711	3	US-08-825-487A-3
3	5587.4	100.0	5711	3	US-09-074-476-5
4	5585.8	99.9	5711	2	US-08-658-322-1
5	5585.8	99.9	5712	2	US-08-603-753D-1
6	5585.8	99.9	5712	3	US-09-099-753-1
7	5585.8	99.9	5712	4	US-08-986-106-1
8	5585.8	99.9	5712	4	US-09-007-678B-47
9	5585.8	99.9	5914	1	US-08-480-784-1
10	5585.8	99.9	5914	1	US-08-483-553-1
11	5585.8	99.9	5914	1	US-08-487-002-1
12	5585.8	99.9	5914	1	US-08-483-553-1
13	5585.8	99.9	5914	1	US-08-483-553-1
14	5585.8	99.9	5914	1	US-08-483-553-1
15	5585.8	99.9	5914	1	US-08-483-553-1
16	5585.8	99.9	5914	1	US-08-483-553-1
17	5585.8	99.9	5914	1	US-08-483-553-1
18	5585.8	99.9	5914	1	US-08-483-553-1
19	5585.8	99.9	5914	1	US-08-483-553-1
20	5585.8	99.9	5914	1	US-08-483-553-1
21	5585.8	99.9	5914	1	US-08-483-553-1
22	5585.8	99.9	5914	1	US-08-483-553-1
23	5585.8	99.9	5914	1	US-08-483-553-1
24	5585.8	99.9	5914	1	US-08-483-553-1
25	5585.8	99.9	5914	1	US-08-483-553-1
26	5585.8	99.9	5914	1	US-08-483-553-1
27	5585.8	99.9	5914	1	US-08-483-553-1

28	5581	99.9	5711	3	US-09-074-476-1	Sequence 1, Appl
29	5574.8	99.7	5712	1	US-08-425-061-12	Sequence 12, Appl
30	5574.8	99.7	5712	1	US-08-825-886-12	Sequence 12, Appl
31	5573.8	99.7	5710	1	US-08-425-061-6	Sequence 6, Appl
32	5573.8	99.7	5710	1	US-08-825-886-6	Sequence 6, Appl
33	5571.8	99.7	5709	1	US-08-425-061-2	Sequence 2, Appl
34	5571.8	99.7	5709	1	US-08-825-886-2	Sequence 2, Appl
35	5571.8	99.7	5709	1	US-08-425-061-8	Sequence 8, Appl
36	5571.8	99.7	5709	1	US-08-825-886-8	Sequence 8, Appl
37	5571.8	99.7	5709	1	US-08-425-061-2	Sequence 2, Appl
38	5571.8	99.7	5709	1	US-08-825-886-2	Sequence 2, Appl
39	5571.8	99.7	5709	1	US-08-425-061-2	Sequence 2, Appl
40	5571.8	99.7	5709	1	US-08-825-886-2	Sequence 2, Appl
41	5567.8	99.6	5707	1	US-08-425-061-11	Sequence 11, Appl
42	5567.8	99.6	5707	1	US-08-825-886-11	Sequence 11, Appl
43	5531.8	99.0	5689	1	US-08-425-061-3	Sequence 3, Appl
44	5531.8	99.0	5689	1	US-08-825-886-3	Sequence 3, Appl
45	5505.6	98.5	5770	1	US-08-425-061-5	Sequence 5, Appl

ALIGNMENTS

RESULT 1
US-08-798-691-3
Sequence 3, Application US/08798691
Patent No. 5750400
GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvarez, Christopher P.
APPLICANT: Citz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Schelter, Denise B.
APPLICANT: Zeng, Bin
TITLE OF INVENTION: Coding Sequences of the Human
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: ONCORMED
STREET: 200 Perry Parkway
CITY: Galtersberg
STATE: MD
COUNTRY: USA
ZIP: 20877
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patent Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/798,691
FILING DATE: 12-Feb-97
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Thomas Gallegos
REGISTRATION NUMBER: 32,692
REFERENCE/DOCKET NUMBER: PA-0054C1P
TELECOMMUNICATION INFORMATION:
TELEPHONE: 301-527-2051
TELEFAX: 301-208-6997
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17

MAP POSITION: 17q21
US-08-798-691-3

Query Match 100.0%; Score 5587.4; DB 1; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5588; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 ATGATTTATCTGCTCTCTGCGCTTGAAGAATACAAATGTCTATTAATGTCAGAAA 60
DB 120 ATGATTTATCTGCTCTCTGCGCTTGAAGAATACAAATGTCTATTAATGTCAGAAA 179
QY 61 ATCTTAGAGTGTCCCATCTGCTGGAAGTTGATCAGAAACCTGTCTCCACAAAGTGTAC 120
DB 180 ATCTTAGAGTGTCCCATCTGCTGGAAGTTGATCAGAAACCTGTCTCCACAAAGTGTAC 239
QY 121 CACATATTTTGCAGAAATTTTGCATGCTGGAACCTTCCAAACGAGAAAGGGCTTCACAG 180
DB 240 CACATATTTTGCAGAAATTTTGCATGCTGGAACCTTCCAAACGAGAAAGGGCTTCACAG 299
QY 181 TGTCTTTATGTAAAGATGATATTAACCAAAAGAGGCTTACAAAGAAAGTACGAGATTACT 240
DB 300 TGTCTTTATGTAAAGATGATATTAACCAAAAGAGGCTTACAAAGAAAGTACGAGATTACT 359
QY 241 CAACCTTGTGAAGAGCTATGAAATTCATTTTGTCTTTCACGCTTGACAGAGTTGGAG 300
DB 360 CAACCTTGTGAAGAGCTATGAAATTCATTTTGTCTTTCACGCTTGACAGAGTTGGAG 419
QY 301 TATGCAACAGCTATTAATTTTGCAGAAAGAAATTAATCTCTGCAACATCTAAAGAT 360
DB 420 TATGCAACAGCTATTAATTTTGCAGAAAGAAATTAATCTCTGCAACATCTAAAGAT 479
QY 361 GAAGTTTCTATCTATCAAAAGTATGGGCTTACAGAAACCTGCCAAAGACTTGTACAGAT 420
DB 480 GAAGTTTCTATCTATCAAAAGTATGGGCTTACAGAAACCTGCCAAAGACTTGTACAGAT 539
QY 421 GAACCCGAAATTCCTCTCTGAGGAAACCAAGTCCAGTCCAGTCACTCTAACCTTGA 480
DB 540 GAACCCGAAATTCCTCTCTGAGGAAACCAAGTCCAGTCCAGTCACTCTAACCTTGA 599
QY 481 ACTGTGAGAACTCTGAGGAAACCAAGTCCAGTCCAGTCACTCTAACCTTGA 540
DB 600 ACTGTGAGAACTCTGAGGAAACCAAGTCCAGTCCAGTCACTCTAACCTTGA 659
QY 541 GAATTTGGATCTGATTTCTTCTGAAGATACCCCTTAATAGGCACTTATTCAGTGTGGGA 600
DB 660 GAATTTGGATCTGATTTCTTCTGAAGATACCCCTTAATAGGCACTTATTCAGTGTGGGA 719
QY 601 GATCAGAAATGTTTCAAAATCACCCCTCAAGGAGACGAGGATGAATCAGTTGGATTCT 660
DB 720 GATCAGAAATGTTTCAAAATCACCCCTCAAGGAGACGAGGATGAATCAGTTGGATTCT 779
QY 661 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGAGATGTAAACAAATACTGAAACATCAAA 720
DB 780 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGAGATGTAAACAAATACTGAAACATCAAA 839
QY 721 CCCAGTATATGATTTTAACACACCTGAGAAAGCTGACGTGAAGAGCATCCAGAAAG 780
DB 840 CCCAGTATATGATTTTAACACACCTGAGAAAGCTGACGTGAAGAGCATCCAGAAAG 899
QY 781 TATAGAGGTAGTCTGTTTCAAACTTGTGATGTGAGAGCATGTGGACAAATACTGATGCC 840
DB 900 TATAGAGGTAGTCTGTTTCAAACTTGTGATGTGAGAGCATGTGGACAAATACTGATGCC 959
QY 841 AGCTCATTTACAGATGAGACAGAGCTTATTAATCACTAAAGACAGATGAATGTAGAA 900
DB 960 AGCTCATTTACAGATGAGACAGAGCTTATTAATCACTAAAGACAGATGAATGTAGAA 1019
QY 901 AAGGCTGAATCTGTATTAATAAGCAACAGCTGCTTATGAGAGAGCCACATATAACGA 960
DB 1020 AAGGCTGAATCTGTATTAATAAGCAACAGCTGCTTATGAGAGAGCCACATATAACGA 1079
QY 961 TGGGCTGGAAGTAAAGAAACATGTAAATAGGGGAGATCCAGACAGAAAAAAGTAA 1020

DB 1080 TGGGCTGGAAGTAAAGAAACATGTAAATAGGGGAGATCCAGACAGAAAAAAGTAA 1139
QY 1021 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAAACCTGCATGC 1080
DB 1140 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAAACCTGCATGC 1199
QY 1081 TCAGAGAAATCTTAGAGATTAAGTAAAGATGTTCTTGTGATTAAGCTAAATAGCAGATTAC 1140
DB 1200 TCAGAGAAATCTTAGAGATTAAGTAAAGATGTTCTTGTGATTAAGCTAAATAGCAGATTAC 1259
QY 1141 AAAGTTATGAGTGTCTTCCAGAAAGTATGATGATGATGATGATGATGATGATGATGAT 1200
DB 1260 AAAGTTATGAGTGTCTTCCAGAAAGTATGATGATGATGATGATGATGATGATGATGAT 1319
QY 1201 GGGGAGTCTGAATCAAAATGCCAAATAGTACTGTGATGATGATGATGATGATGATGATGAT 1260
DB 1320 GGGGAGTCTGAATCAAAATGCCAAATAGTACTGTGATGATGATGATGATGATGATGATGAT 1379
QY 1261 GAATATTTCTGTTCTTCAAGAGAAATAGACTTACTGAGGAGTATCTCATGAGGCTTTA 1320
DB 1380 GAATATTTCTGTTCTTCAAGAGAAATAGACTTACTGAGGAGTATCTCATGAGGCTTTA 1439
QY 1321 ATATGTAAGTGAAGAGTCTACCTCAAAATCAGTAGAGATTAATTTGAAGACAAATA 1380
DB 1440 ATATGTAAGTGAAGAGTCTACCTCAAAATCAGTAGAGATTAATTTGAAGACAAATA 1499
QY 1381 TTTGGGAAACCTATCGAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1440
DB 1500 TTTGGGAAACCTATCGAGAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1559
QY 1441 CTAAATTTAGAGAGATTTGTTTACTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1500
DB 1560 CTAAATTTAGAGAGATTTGTTTACTGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1619
QY 1501 AAATTAAGGCGTAAAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1560
DB 1620 AAATTAAGGCGTAAAGAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1679
QY 1561 GCAGATTTGGAGTCAAAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1620
DB 1680 GCAGATTTGGAGTCAAAAGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 1739
QY 1621 CAGATTTGCTCAAGTATTAATTTACTAATAGTGTGATGAGGAGGAGGAGGAGGAGGAGGAG 1680
DB 1740 CAGATTTGCTCAAGTATTAATTTACTAATAGTGTGATGAGGAGGAGGAGGAGGAGGAGGAG 1799
QY 1681 TCTATTTAGAGTGAAGAAATCTTAACCAATTAAGTCACTGAGGAGGAGGAGGAGGAGGAG 1740
DB 1800 TCTATTTAGAGTGAAGAAATCTTAACCAATTAAGTCACTGAGGAGGAGGAGGAGGAGGAG 1859
QY 1741 AAAAGGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATATGAAATGAAATTAATATATC 1800
DB 1860 AAAAGGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATATGAAATGAAATTAATATATC 1919
QY 1801 CACATTTAAAAAGCAGCTTAAAAAGAAATAGGCTGAGGAGGAGGAGGAGGAGGAGGAGGAG 1860
DB 1920 CACATTTAAAAAGCAGCTTAAAAAGAAATAGGCTGAGGAGGAGGAGGAGGAGGAGGAGGAG 1979
QY 1861 CATGCGTTGAAGTGTAGTGTAGTGAATTAAGCCACCTTAATTTACTGAAATTTGCA 1920
DB 1980 CATGCGTTGAAGTGTAGTGTAGTGAATTAAGCCACCTTAATTTACTGAAATTTGCA 2039
QY 1921 ATTGATAGTGTCTTACAGTGAAGAGATTAAGAAAAAAGTAAACCAATATGCAAGTGC 1980
DB 2040 ATTGATAGTGTCTTACAGTGAAGAGATTAAGAAAAAAGTAAACCAATATGCAAGTGC 2099
QY 1981 AGGCAAGCAGAAACCTTAACCTCATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2040
DB 2100 AGGCAAGCAGAAACCTTAACCTCATGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAG 2159
QY 2041 AGTAAACAGCCAAATGAAGACAGCAAGTAAAGACATGACAGTGTACTTCCAGAGCTG 2100
DB 2160 AGTAAACAGCCAAATGAAGACAGCAAGTAAAGACATGACAGTGTACTTCCAGAGCTG 2219

QY	2101	AAGTTAACAAATGCACCTGGTTCTTTACTAAGTGTCTCAATACCAGTGAACCTTAAGAA	2160
Db	2220	AAGTTAAACAAATGCACCTGGTTCTTTACTAAGTGTCTCAATACCAGTGAACCTTAAGAA	2279
QY	2161	TTTGCAATCCTAGCCTCCAAAGAGAGAAAAAGAAAGAAACCTAGAACGTTAAAGTG	2220
Db	2280	TTTGCAATCCTAGCCTCCAAAGAGAGAAAAAGAAAGAAACCTAGAACGTTAAAGTG	2339
QY	2221	TCTAATAATGCTGAAGACCCCAAAAGATCTCATGTTAAGTGAGAAAGGGTTTGCAACT	2280
Db	2340	TCTAATAATGCTGAAGACCCCAAAAGATCTCATGTTAAGTGAGAAAGGGTTTGCAACT	2399
QY	2281	GAAAGATCTGAGAGAGTAGCAGATATTTTCATGTGTAACCTGGTACTGATATAGGACATCAG	2340
Db	2400	GAAAGATCTGAGAGAGTAGCAGATATTTTCATGTGTAACCTGGTACTGATATAGGACATCAG	2459
QY	2341	GAAAGATCTGCTTACTGGAAGTTAGCACTAGGGAAGGCAAAACAGAACCAATTA	2400
Db	2460	GAAAGATCTGCTTACTGGAAGTTAGCACTAGGGAAGGCAAAACAGAACCAATTA	2519
QY	2401	TGTGTGATCAGTGTGCGACATTTGGAACCCCAAGGACATAATTATCATGGTTTCCAA	2460
Db	2520	TGTGTGATCAGTGTGCGACATTTGGAACCCCAAGGACATAATTATCATGGTTTCCAA	2579
QY	2461	GATATATGAATGACACAGAAAGGCTTTAAGTATCCATTGGACATGAAGTTAACACAGT	2520
Db	2580	GATATATGAATGACACAGAAAGGCTTTAAGTATCCATTGGACATGAAGTTAACACAGT	2639
QY	2521	CGGGAACCAAGCATGAAATGGAAGAAAGTGAACCTGATGCTCAGTATTTGCAGAAATCA	2580
Db	2640	CGGGAACCAAGCATGAAATGGAAGAAAGTGAACCTGATGCTCAGTATTTGCAGAAATCA	2699
QY	2581	TTCAAGGTTTCAAAAGCGGCAGTCAATTCCTGTTTCAATCCAGAAATGCAGAAAG	2640
Db	2700	TTCAAGGTTTCAAAAGCGGCAGTCAATTCCTGTTTCAATCCAGAAATGCAGAAAG	2759
QY	2641	GAATGTGCMAATTCCTGCGCCACTCTGGGTCTTTAAAGAAACAAAGTCCAAAAGTCACT	2700
Db	2760	GAATGTGCMAATTCCTGCGCCACTCTGGGTCTTTAAAGAAACAAAGTCCAAAAGTCACT	2819
QY	2701	TTTGAAATGTGAACAAAGGAAGAAATATCAAGAAAGATGAGTAAATATACCCCTGA	2760
Db	2820	TTTGAAATGTGAACAAAGGAAGAAATATCAAGAAAGATGAGTAAATATACCCCTGA	2879
QY	2761	CAGACAGTAAATATACAGTGCAGGCTTTCCTGTTGGTCAGAAAGATAAAGCCAGTTGAT	2820
Db	2880	CAGACAGTAAATATACAGTGCAGGCTTTCCTGTTGGTCAGAAAGATAAAGCCAGTTGAT	2939
QY	2821	AATGCCAATGTAGTATCAAAAGAGGCTCTAAGTTTTGTCTATCATCTCACTTCAGAGGC	2880
Db	2940	AATGCCAATGTAGTATCAAAAGAGGCTCTAAGTTTTGTCTATCATCTCACTTCAGAGGC	2999
QY	2881	AACGAAATCGAGTCATCTACCCAAATTAACATGAGCTTTTACAAAACCCATATCGATA	2940
Db	3000	AACGAAATCGAGTCATCTACCCAAATTAACATGAGCTTTTACAAAACCCATATCGATA	3059
QY	2941	CCACCACTTTTCCCATCAAGTCAATTTGTTAAACTAAATGTAGAAAAAATCTGCTAGAG	3000
Db	3060	CCACCACTTTTCCCATCAAGTCAATTTGTTAAACTAAATGTAGAAAAAATCTGCTAGAG	3119
QY	3001	GAAAACTTTGAGGAACATTCAAATGTCACTGTGAAGAGAAATGGAAATGAGACATTCCA	3060
Db	3120	GAAAACTTTGAGGAACATTCAAATGTCACTGTGAAGAGAAATGGAAATGAGACATTCCA	3179
QY	3061	AGTACAGTGAACAAATTAGCCCTGAATTAACATTAGAAAAATGTTTTAAAGAACCCAGC	3120
Db	3180	AGTACAGTGAACAAATTAGCCCTGAATTAACATTAGAAAAATGTTTTAAAGAACCCAGC	3239
QY	3121	TCAAGCAATTAATGAAGTAGTGGTTCAGATCTAATGAAGTGGGCTCCAGTATTAATGAA	3180
Db	3240	TCAAGCAATTAATGAAGTAGTGGTTCAGATCTAATGAAGTGGGCTCCAGTATTAATGAA	3299

QY	3161	ATAGTTCACGATGATGAAAAACATTTAACAGACACTAGTACGAAACAGAGGGCCAAATTTG	3240
Db	3300	ATAGTTCACGATGATGAAAAACATTTCACAGACACTAGTACGAAACAGAGGGCCAAATTTG	3359
QY	3241	AATGCTATGCTAGTATGATTAAGGGGTTTGGCAACTGAGGCTATTAACCAAGCTTCCTGGA	3300
Db	3360	AATGCTATGCTAGTATGATTAAGGGGTTTGGCAACTGAGGCTATTAACCAAGCTTCCTGGA	3419
QY	3301	AGTAATTTGAAGCACTTCGAAATATAAAAAGCAAGAAATATGAAGAAATGATTTGACACTGT	3360
Db	3420	AGTAATTTGAAGCACTTCGAAATATAAAAAGCAAGAAATATGAAGAAATGATTTGACACTGT	3479
QY	3361	AATACAGATTTCTCTCCATATCTGATTTCAATTAACATTAAGAACGCTATGGAAGTATG	3420
Db	3480	AATACAGATTTCTCTCCATATCTGATTTCAATTAACATTAAGAACGCTATGGAAGTATG	3539
QY	3421	CATGATCTCAGGCTTTGTTCTGAGACACCTGATGCTGCTTAAGATGATGGGAATAAG	3480
Db	3540	CATGATCTCAGGCTTTGTTCTGAGACACCTGATGCTGCTTAAGATGATGGGAATAAG	3599
QY	3481	GAAGATCTAGTTTGTCTGAATAATGACATTAAAGAAATTTGCTGTTTTAGCAAAAGC	3540
Db	3600	GAAGATCTAGTTTGTCTGAATAATGACATTAAAGAAATTTGCTGTTTTAGCAAAAGC	3659
QY	3541	GTCCAGAAAGAGAGCTTACGAGAGCTTACGCTTTACCCATACACATTTGGCTCAG	3600
Db	3660	GTCCAGAAAGAGAGCTTACGAGAGCTTACGCTTTACCCATACACATTTGGCTCAG	3719
QY	3601	GATTACCGAAGAGGGGCCAAGAAATTAAGTCCACAGAAAGAACTTATCTAGTAGAGAT	3660
Db	3720	GATTACCGAAGAGGGGCCAAGAAATTAAGTCCACAGAAAGAACTTATCTAGTAGAGAT	3779
QY	3661	GAAGAGCTTCCTGCTTCACACACTTGTATTTGGTAAAGTAAACAATATACCTTCACAG	3720
Db	3780	GAAGAGCTTCCTGCTTCACACACTTGTATTTGGTAAAGTAAACAATATACCTTCACAG	3839
QY	3721	TCTACTAGGATAGCAGCGGTGCTACGAGTGTCTGTCTAAGAACACAGAGAGAAATTA	3780
Db	3840	TCTACTAGGATAGCAGCGGTGCTACGAGTGTCTGTCTAAGAACACAGAGAGAAATTA	3899
QY	3781	TTATCATTTGAAGAAATAGCTTAAATGACGTGCAATACCGATTAATTTGGCAAGGCATCT	3840
Db	3900	TTATCATTTGAAGAAATAGCTTAAATGACGTGCAATACCGATTAATTTGGCAAGGCATCT	3959
QY	3841	CAGGAACATCACCTTATGAGAGAAACAAATGTTCTGCTACTCTGTTTCTTCACAGAGC	3900
Db	3960	CAGGAACATCACCTTATGAGAGAAACAAATGTTCTGCTACTCTGTTTCTTCACAGAGC	4019
QY	3901	AGTGAATTTGAAGACTTGACTGCAAAATACAAACCCAGATCCTTTCTTGATTTGGTCT	3960
Db	4020	AGTGAATTTGAAGACTTGACTGCAAAATACAAACCCAGATCCTTTCTTGATTTGGTCT	4079
QY	3961	TCCAAACAAATGAGGCACTCTGTAAGCCAGGAGTGGTCTGAGTGCACAAAGAAATG	4020
Db	4080	TCCAAACAAATGAGGCACTCTGTAAGCCAGGAGTGGTCTGAGTGCACAAAGAAATG	4139
QY	4021	GTTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAATTAATCAAGAAAGACAAAGC	4080
Db	4140	GTTTCAGATGATGAAGAAAGAGAAACGGGCTTGGAAATTAATCAAGAAAGACAAAGC	4199
QY	4081	ATGATTTCAAACTTAGTGAAGACAGACATCTGGGTGTGAGACTGGAACAAAGGCTCTGAA	4140
Db	4200	ATGATTTCAAACTTAGTGAAGACAGACATCTGGGTGTGAGACTGGAACAAAGGCTCTGAA	4259
QY	4141	GACGTCTCAGGGCTATCTCTCACAAGTACATTTTAAACCACCTCAGCAGAGGGATACATG	4200
Db	4260	GACGTCTCAGGGCTATCTCTCACAAGTACATTTTAAACCACCTCAGCAGAGGGATACATG	4319
QY	4201	CAACATTAACCTGATTAAGAGCTCCACAGAGAAATGGCTGAACATAGAAAGCTGTGTTGAACAG	4260
Db	4320	CAACATTAACCTGATTAAGAGCTCCACAGAGAAATGGCTGAACATAGAAAGCTGTGTTGAACAG	4379
QY	4261	CATGGAGGCCAGCCTTCAACAGCTACCTCCATCAATAGTACGCTTCTGCTTCAG	4320

```

Db 4380 CATGGAGCCAGCCTTCAAGAGTACCTTCATCATCAAGTACTCTCTCCCTTGAG 4439
QY 4321 GACCTGGGAATCCAGAACAAAGCAGATCAAGAAAAGAGTATTAACTTCACAGAAAAGT 4380
Db 4440 GACCTGGGAATCCAGAACAAAGCAGATCAAGAAAAGAGTATTAACTTCACAGAAAAGT 4499
QY 4381 AGTGAATACCTTAAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAACTTTGAGTGTCT 4440
Db 4500 AGTGAATACCTTAAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAACTTTGAGTGTCT 4559
QY 4441 GCAGATAGTCTTACAGTAAATAAAGAACAGAGTGAAGAAAGTCAATCCCTTCTAAA 4500
Db 4560 GCAGATAGTCTTACAGTAAATAAAGAACAGAGTGAAGAAAGTCAATCCCTTCTAAA 4619
QY 4501 TGCCCATCATTAAGTGAAGTGTGACATGCAAGTCTCTGGAGAGTCTTCAGAAATGA 4560
Db 4620 TGCCCATCATTAAGTGAAGTGTGACATGCAAGTCTCTGGAGAGTCTTCAGAAATGA 4679
QY 4561 AACTACCATCTCAAGAGAGCTCAATTAAGTGTGATGAGAGAGCAACAGCTGGA 4620
Db 4680 AACTACCATCTCAAGAGAGCTCAATTAAGTGTGATGAGAGAGCAACAGCTGGA 4739
QY 4621 GAGTCTGGGCCACACAGATTTGACGAAAATCTTACTTCCAGAGCAAGATCTAGAGGA 4680
Db 4740 GAGTCTGGGCCACACAGATTTGACGAAAATCTTACTTCCAGAGCAAGATCTAGAGGA 4799
QY 4681 ACCCTTACCTGGAATGGAATGAGAGCTCTTCTGATGAGAGCCGGAATCTGATCTCT 4740
Db 4800 ACCCTTACCTGGAATGGAATGAGAGCTCTTCTGATGAGAGCCGGAATCTGATCTCT 4859
QY 4741 GAAGACAGAGCCCAAGAGTCAAGTCTGTTGGCAACATACATCTTCAACCTCTCATATG 4800
Db 4860 GAAGACAGAGCCCAAGAGTCAAGTCTGTTGGCAACATACATCTTCAACCTCTCATATG 4919
QY 4801 AAAGTCCCAATGGAAGTGGCAAGATCTCCAGATCTCCAGCTGCTGCTCATCTACT 4860
Db 4920 AAAGTCCCAATGGAAGTGGCAAGATCTCCAGATCTCCAGCTGCTGCTCATCTACT 4979
QY 4861 GATACCTGCTGGTAAATGCAATGGAAGAGTGAAGAGGAGAGAGCAAGAAATGGACA 4920
Db 4980 GATACCTGCTGGTAAATGCAATGGAAGAGTGAAGAGGAGAGAGCAAGAAATGGACA 5039
QY 4921 GCTTCAACAGAAAGGCTCAACAAAAGAAATGTCATGATGATGCTGCTGAGCCAGAA 4980
Db 5040 GCTTCAACAGAAAGGCTCAACAAAAGAAATGTCATGATGATGCTGCTGAGCCAGAA 5099
QY 4981 GAATTTATGCTGCTGCTCAACTTTGCCGAAAACCCATCATCTTAACTAATTAATT 5040
Db 5100 GAATTTATGCTGCTGCTCAACTTTGCCGAAAACCCATCATCTTAACTAATTAATT 5159
QY 5041 ACTGAGAGACTACTCATGTTGTTATGAAAACAGATGCTGATGTTGTGTGAAGAGACA 5100
Db 5160 ACTGAGAGACTACTCATGTTGTTATGAAAACAGATGCTGATGTTGTGTGAAGAGACA 5219
QY 5101 CTGAAATATTTTCTAGGAATTCGCGAGAGAAATGGTAGTATGCTATTTCTGGGTGACC 5160
Db 5220 CTGAAATATTTTCTAGGAATTCGCGAGAGAAATGGTAGTATGCTATTTCTGGGTGACC 5279
QY 5161 CAGTCTATTAAAGAAAGAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAAATGTG 5220
Db 5280 CAGTCTATTAAAGAAAGAAAATGCTGAATGAGCATGATTTTGAAGTCAAGAGAAATGTG 5339
QY 5221 GTCATGGAAGAAACCAAGATGTCAAAGGAGAGCAAGATCCAGAGAGAAAGATC 5280
Db 5340 GTCATGGAAGAAACCAAGATGTCAAAGGAGAGCAAGATCCAGAGAGAAAGATC 5399
QY 5281 TTCAGGGGGCTAGAAATCTGTGCTATGAGGCCCTTACCAACATGCCCCAGATCACTG 5340
Db 5400 TTCAGGGGGCTAGAAATCTGTGCTATGAGGCCCTTACCAACATGCCCCAGATCACTG 5459
QY 5341 GAATGATGTGACAGCTGTGTGCTCTTCTGTGTAAGAGCTTTCATCATCTACCTT 5400

```

```

Db 5460 GAATGATGTGACAGCTGTGTGCTCTCTGTGTGAAGAGCTTTCATCATCTACCTT 5519
QY 5401 GGCACAGGTGTGCCAACCAATTTGTGTGTGAGCCAGATGCTGCAGAGAGCAATGCG 5460
Db 5520 GGCACAGGTGTGCCAACCAATTTGTGTGTGAGCCAGATGCTGCAGAGAGCAATGCG 5579
QY 5461 TTCATGCAATTTGGCAGATGTGTGAGGACACCTGTGTGAGCCAGAGAGTGGTGTGAC 5520
Db 5580 TTCATGCAATTTGGCAGATGTGTGAGGACACCTGTGTGAGCCAGAGAGTGGTGTGAC 5639
QY 5521 AGTGAAGATCTTACCATGTCAGAGAGCTGCAGACACTTACCTGATACCCAGATCCCCAC 5580
Db 5640 AGTGAAGATCTTACCATGTCAGAGAGCTGCAGACACTTACCTGATACCCAGATCCCCAC 5699
QY 5581 AGCCACTAC 5589
Db 5700 AGCCACTAC 5708

```

```

RESULT 2
US-08-825-487A-3
; Sequence 3, Application US/08825487A
; Patent No. 6048689
; GENERAL INFORMATION:
; APPLICANT: Murphy, Patricia D.
; APPLICANT: White, Marga B.
; TITLE OF INVENTION: METHODS FOR IDENTIFYING VARIATIONS IN POLYNUCLEOTIDE SEQUE
; NUMBER OF SEQUENCES: 110
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Howrey & Simon
; STREET: 1299 Pennsylvania Avenue., N.W.
; CITY: Washington,
; STATE: DC
; COUNTRY: USA
; ZIP: 20004
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/825,487A
; FILING DATE: 28-MAR-1997
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: PCT/US98/060002
; FILING DATE: 26-MAR-1998
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Albert P. Halluin
; REGISTRATION NUMBER: 25,227
; REFERENCE/DOCKET NUMBER: 05371.0012.999
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 650-463-8100
; TELEFAX: 650-463-8400
; INFORMATION FOR SEQ ID NO: 3:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 5711 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: not relevant
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; STRAIN: BRCAL
; POSITION IN GENOME:
; CHROMOSOME/SEGMENT: 17
; MAP POSITION: 17q21
; US-08-825-487A-3
Query Match 100.0%; Score 5587.4; DB 3; Length 5711;
Best Local Similarity 100.0%; Prid. No. 0;
Matches 5588; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

OY	1	ATGATATTATCTGCTCTTCGGCTTGAGACATACAAAATGTCATTATATGCTATGCGAATA	60
Db	120	ATGGAATTTATCTGCTCTTCGGCTTGAGAAATAATACAAAATGTCATTATATGCTATGCGAATA	179
OY	61	ATCTTAGAGTGTCCCATCTGCTGTGAGTGTGATCAAGGAACCGTGTCCACAAAGTGTCAC	120
Db	180	ATCTTAGAGTGTCCCATCTGCTGTGAGTGTGATCAAGGAACCGTGTGTCCACAAAGTGTCAC	239
OY	121	CACATATTTTGCAAAATTTTGGCATGCTGAACTTCTCAACACGAGAAAGGGCCTTCACAG	180
Db	240	CACATATTTTGCAAAATTTTGGCATGCTGAACTTCTCAACACGAGAAAGGGCCTTCACAG	299
OY	181	TGTCCTTTATGTAAAGATGATATTAACCAAAAGGACCTTCAAGAAAGTATCGAGATTATGT	240
Db	300	TGTCCTTTATGTAAAGATGATATTAACCAAAAGGACCTTCAAGAAAGTATCGAGATTATGT	359
OY	241	CAACTTGTGTGAAGAGCTATGTGAAAAATCATTTTGTGCTTTTCAGCTTTCACACAGTTTGGAG	300
Db	360	CAACTTGTGTGAAGAGCTATGTGAAAAATCATTTTGTGCTTTTCAGCTTTCACACAGTTTGGAG	419
OY	301	TATGCAAAACAGCTATATATTTTGCAAAAAAGAAAAATAAATCTCTCTGAACATCTAAAGAT	360
Db	420	TATGCAAAACAGCTATATATTTTGCAAAAAAGAAAAATAAATCTCTCTGAACATCTAAAGAT	479
OY	361	GAACTTTCTATCATCAACCAAGATATGGGCTACAGAAACCGTGGCCAAAAGACTTCTACAGAT	420
Db	480	GAACTTTCTATCATCAACCAAGATATGGGCTACAGAAACCGTGGCCAAAAGACTTCTACAGAT	539
OY	421	GAACCCGAAAAATCCCTCCCTTCAGAGAAACACAGTCTCAGTGTCCAACTCTTCAACCTTGA	480
Db	540	GAACCCGAAAAATCCCTCCCTTCAGAGAAACACAGTCTCAGTGTCCAACTCTTCAACCTTGA	599
OY	481	ACTGTGAGACTCTGAGAGCAAAAGACGGATACAACTCTAAAAGACTGTGTCTACATT	540
Db	600	ACTGTGAGAACTCTGAGAGCAAAAGACGGATACAACTCTAAAAGACTGTGTCTACATT	659
OY	541	GAATTGGAGTGTGATTTCTCTGGAAGATTCCTTTATTAAGCAACTTATGGAAGTGGAGA	600
Db	660	GAATTGGAGTGTGATTTCTCTGGAAGATTCCTTTATTAAGCAACTTATGGAAGTGGAGA	719
OY	601	GATCAGAGATTTGTACAAATCACCCCTCAAGGAACACAGGATGAAATCAGTTTGGATTCT	660
Db	720	GATCAGAGATTTGTACAAATCACCCCTCAAGGAACACAGGATGAAATCAGTTTGGATTCT	779
OY	661	GCAAAAAAGGCTGCTGTGATTTTCTGAGACGATGTAAACAAATCTGGAACATCATCA	720
Db	780	GCAAAAAAGGCTGCTGTGATTTTCTGAGACGATGTAAACAAATCTGGAACATCATCA	839
OY	721	CCCAGTATATATGATTTTGAAACACACACAGAGCGTGCAGGTGAGAGGCATTCAGAAAG	780
Db	840	CCCAGTATATATGATTTTGAAACACACACAGAGCGTGCAGGTGAGAGGCATTCAGAAAG	899
OY	781	TATCAGGAGTAGTCTGTTTCAAACTGCAATGTGAAGCCATGTGGCACAATATCTATGCC	840
Db	900	TATCAGGAGTAGTCTGTTTCAAACTGCAATGTGAAGCCATGTGGCACAATATCTATGCC	959
OY	841	AGCTCATTTACGCACTGAGAAACAGAGATTATTAACCTAAAGACAGAAATGAATGTAA	900
Db	960	AGCTCATTTACGCACTGAGAAACAGAGATTATTAACCTAAAGACAGAAATGAATGTAA	1019
OY	901	AAGGCTGAATTTCTGTAAATAAAAAGCAACAGCTGCTTAGCAAGAGGCAACATTAACGA	960
Db	1020	AAGGCTGAATTTCTGTAAATAAAAAGCAACAGCTGCTTAGCAAGAGGCAACATTAACGA	1079
OY	961	TGGGCTGGAAGTAAAGGAACATGTATATGATATGGCGGACTCCACACAGAAAAAAGSTA	1020
Db	1080	TGGGCTGGAAGTAAAGGAACATGTATATGATATGGCGGACTCCACACAGAAAAAAGSTA	1139
OY	1021	GATCTGAATGCTGATCCCTGTGTGAGAGAAAACAATGAATTAAGCAAGAAATCGCATGC	1080
Db	1140	GATCTGAATGCTGATCCCTGTGTGAGAGAAAACAATGAATTAAGCAAGAAATCGCATGC	1199

QY	1081	TCAGAGAAATCC	TAGATAC	TACTG	AAGATG	TCCTG	TATAC	CACTAA	TATAC	GACAT	CAG	1140										
Db	1200	TCAGAGAAATCC	TAGATAC	TACTG	AAGATG	TCCTG	TATAC	CACTAA	TATAC	GACAT	CAG	1259										
QY	1141	AAAGTTAAT	GAGTGG	TTTCC	AAGAA	TGATGA	CACTG	TATAG	TTCTG	TGACT	CACTGAT	1200										
Db	1260	AAAGTTAAT	GAGTGG	TTTCC	AAGAA	TGATGA	CACTG	TATAG	TTCTG	TGACT	CACTGAT	1319										
QY	1201	GGGAGTCT	GAATCCA	AAATGCC	AAAGTAG	CTGATG	TAT	TGGAC	TTCTT	AAATG	AGTAGAT	1260										
Db	1320	GGGAGTCT	GAATCCA	AAATGCC	AAAGTAG	CTGATG	TAT	TGGAC	TTCTT	AAATG	AGTAGAT	1379										
QY	1261	GAATAT	TTCTG	TTCTT	CCAGAGAA	AATAG	ACTT	CTG	CCAGT	GTAT	CTCAT	GAGCTTTA	1320									
Db	1380	GAATAT	TTCTG	TTCTT	CCAGAGAA	AATAG	ACTT	CTG	CCAGT	GTAT	CTCAT	GAGCTTTA	1439									
QY	1321	AATGT	AAAAAGT	CAAGAG	TTCTC	CTCAAT	CAGT	AGAG	GTAT	AAT	TTGAAG	ACAATA	1380									
Db	1440	AATGT	AAAAAGT	CAAGAG	TTCTC	CTCAAT	CAGT	AGAG	GTAT	AAT	TTGAAG	ACAATA	1499									
QY	1381	TTTTGGAAAA	CCCTAT	CGAAG	AAAGCC	CTCCCA	ACTT	AAAGCC	ATG	TAACT	GAAT	1440										
Db	1500	TTTTGGAAAA	CCCTAT	CGAAG	AAAGCC	CTCCCA	ACTT	AAAGCC	ATG	TAACT	GAAT	1559										
QY	1441	CTAAT	TAT	TAT	ATG	AGCAT	TTTGT	TACT	GTAG	CCACAG	ATAT	TAC	AAGAGCTCCCTCACAAT	1500								
Db	1560	CTAAT	TAT	TAT	ATG	AGCAT	TTTGT	TACT	GTAG	CCACAG	ATAT	TAC	AAGAGCTCCCTCACAAT	1619								
QY	1501	AAAT	TAAACG	CTTAA	AGAGAC	CTTAC	ATAC	AGGCTT	CAT	CTGAG	TTTAT	TAC	AAAA	1560								
Db	1620	AAAT	TAAACG	CTTAA	AGAGAC	CTTAC	ATAC	AGGCTT	CAT	CTGAG	TTTAT	TAC	AAAA	1679								
QY	1561	GCAGAT	TTTGG	CGAT	TCAAAA	AGACT	CCCTG	AAATG	AT	TAAT	TAG	GGAA	CTTAA	CAACCAAGCGAG	1620							
Db	1680	GCAGAT	TTTGG	CGAT	TCAAAA	AGACT	CCCTG	AAATG	AT	TAAT	TAG	GGAA	CTTAA	CAACCAAGCGAG	1739							
QY	1621	CAGAA	TGTC	CAAGT	GTAG	TAT	TACT	AT	AT	AGT	GT	CAG	AGAA	TAAACCAAAAGTGAT	1680							
Db	1740	CAGAA	TGTC	CAAGT	GTAG	TAT	TACT	AT	AT	AGT	GT	CAG	AGAA	TAAACCAAAAGTGAT	1799							
QY	1681	TCTAT	TCCAG	AATG	AGAAAA	TCC	TAA	CCCAAT	TGA	AT	CACT	CGAAAA	AGAA	TGCTTTC	1740							
Db	1800	TCTAT	TCCAG	AATG	AGAAAA	TCC	TAA	CCCAAT	TGA	AT	CACT	CGAAAA	AGAA	TGCTTTC	1859							
QY	1741	AAAAG	CAAA	CGTGA	ACCT	TAA	AGC	AC	AGT	AT	TAA	GA	CAAT	TAAATATC	1800							
Db	1860	AAAAG	CAAA	CGTGA	ACCT	TAA	AGC	AC	AGT	AT	TAA	GA	CAAT	TAAATATC	1919							
QY	1801	CACA	AT	TCAA	AAAG	CAC	CTT	AAAA	GAAT	TAG	CGT	GAG	AGAA	GTCTT	TAC	CCAGCATATT	1860					
Db	1920	CACA	AT	TCAA	AAAG	CAC	CTT	AAAA	GAAT	TAG	CGT	GAG	AGAA	GTCTT	TAC	CCAGCATATT	1979					
QY	1861	CAT	GGCG	TTG	AG	ACT	GT	AG	TAC	AAAT	CT	TAA	GGCC	AC	CT	TAA	TG	ACT	GAAT	TCCAA	1920	
Db	1980	CAT	GGCG	TTG	AG	ACT	GT	AG	TAC	AAAT	CT	TAA	GGCC	AC	CT	TAA	TG	ACT	GAAT	TCCAA	2039	
QY	1921	ATT	GAT	TAG	TTG	TT	T	AG	CAG	T	AG	A	G	A	T	A	A	A	A	A	A	1980
Db	2040	ATT	GAT	TAG	TTG	TT	T	AG	CAG	T	AG	A	G	A	T	A	A	A	A	A	A	2099
QY	1981	AG	GC	AC	AG	CAG	A	AA	CC	T	CA	CT	AT	G	A	A	G	A	G	A	G	2040
Db	2100	AG	GC	AC	AG	CAG	A	AA	CC	T	CA	CT	AT	G	A	A	G	A	G	A	G	2159
QY	2041	AG	TAC	CA	AG	CC	CA	AA	T	GA	CA	AG	CA	AG	CA	AG	CA	AG	CA	AG	CA	2100
Db	2160	AG	TAC	CA	AG	CC	CA	AA	T	GA	CA	AG	CA	AG	CA	AG						

Db	2280	TTTGCAATCTAGCCTTCCAGAGAGAGAAAGAGAAACTGGAACAGTTAAAGTG	2338
OY	2221	TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTTGCAACT	2280
Db	2340	TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTTGCAACT	2399
OY	2281	GAAATATCTGTAGAGAGTAGAGATTTTCATTGTTGTAAGTGTACTGGTACTGATTTATGGCACTAG	2340
Db	2400	GAAATATCTGTAGAGAGTAGAGATTTTCATTGTTGTAAGTGTACTGGTACTGATTTATGGCACTAG	2455
OY	2341	GAAATATCTGCTGTAAGTGAAGTGTAGCACTGTAGGAAAGGCAAAAACAGAACCAATATAA	2400
Db	2460	GAAATATCTGCTGTAAGTGAAGTGTAGCACTGTAGGAAAGGCAAAAACAGAACCAATATAA	2519
OY	2401	TGTGTAGTCAATGTGCAAGCATTTTAAAAACCCCAAGGCACTAATTCATGTTGTTCCAAA	2466
Db	2520	TGTGTAGTCAATGTGCAAGCATTTTAAAAACCCCAAGGCACTAATTCATGTTGTTCCAAA	2579
OY	2461	GATAATAGAAATGACACAGAAAGGCTTTTAAGTATCCATTGGGCACTAGAAATTAACACAGT	2520
Db	2580	GATAATAGAAATGACACAGAAAGGCTTTTAAGTATCCATTGGGCACTAGAAATTAACACAGT	2639
OY	2521	CGGGAACACAGATATGAATGAGACAAAGTGAATTTGCTCACTATTTGCAATATCA	2580
Db	2640	CGGGAACACAGATATGAATGAGACAAAGTGAATTTGCTCACTATTTGCGAGATCA	2699
OY	2581	TTCAAGGTTTCAAAGCGCAGCATTTTGCTGTTTCAAAATCCAGAAATGCACAAAG	2640
Db	2700	TTCAAGGTTTCAAAGCGCAGCATTTTGCTGTTTCAAAATCCAGAAATGCACAAAG	2755
OY	2641	GAATGTGCAACTTCTGTGCCCCACTGTGGGTCCTTAAAGAAACAAAGTCCAAAAGTCACT	2700
Db	2760	GAATGTGCAACTTCTGTGCCCCACTGTGGGTCCTTAAAGAAACAAAGTCCAAAAGTCACT	2819
OY	2701	TTTGAATGTGAACAAAGGAAGAAATTAAGGAAGAAATGAGTCAATATCAAGGCTGTA	2760
Db	2820	TTTGAATGTGAACAAAGGAAGAAATTAAGGAAGAAATGAGTCAATATCAAGGCTGTA	2879
OY	2761	CAGACAGTTAATATCAGCTGACAGGCTTCTGTGTTGGTGCAGAAAGATTAAGCCAGTTAT	2820
Db	2880	CAGACAGTTAATATCAGCTGACAGGCTTCTGTGTTGGTGCAGAAAGATTAAGCCAGTTAT	2939
OY	2821	AATGCCAATGTAGTATCAAGAGAGGCTGTAGGTTTTGTCTATCTCACTGTCAGAGGC	2880
Db	2940	AATGCCAATGTAGTATCAAGAGAGGCTGTAGGTTTTGTCTATCTCACTGTCAGAGGC	2999
OY	2881	AACGAACCTGCACTATTACTGCCAATTAACATGTGACCTTTTACAACCCCATATGTATA	2940
Db	3000	AACGAACCTGCACTATTACTGCCAATTAACATGTGACCTTTTACAACCCCATATGTATA	3055
OY	2941	CCACCACCTTTTCCATCAGTCAAGTCAATTTGTTAAACTAAATGTAGAGAAATCTGCTAGAG	3000
Db	3060	CCACCACCTTTTCCATCAGTCAAGTCAATTTGTTAAACTAAATGTAGAGAAATCTGCTAGAG	3119
OY	3001	GAAAACTTTGAGGAACATTTCAATGTACACTGGAAGAAATGGGAAATGAGAACCTTGCA	3060
Db	3120	GAAAACTTTGAGGAACATTTCAATGTACACTGGAAGAAATGGGAAATGAGAACCTTGCA	3179
OY	3061	AGTACAGTGAAGACAAATTAGCCGTAAATTAACATTAGAGAAATGTTTTTAAAGAACCCAGC	3120
Db	3180	AGTACAGTGAAGACAAATTAGCCGTAAATTAACATTAGAGAAATGTTTTTAAAGAACCCAGC	3239
OY	3121	TCAAGCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAA	3180
Db	3240	TCAAGCAATATTAATGAAGTAGGTTCCAGTACTAATGAAGTGGCTCCAGTATTAATGAA	3299
OY	3181	ATAGGTTCCAGTATGAAGAAACCTTATACAGAACTAGTAGAAACAGAGGGCCAAAATTG	3240
Db	3300	ATAGGTTCCAGTATGAAGAAACCTTATACAGAACTAGTAGAAACAGAGGGCCAAAATTG	3355
OY	3241	AATGCTAATGCTTAGATTAGGGGTTTTGCAACCTGAAGTCTATAAACAAAGTCTTCTGGA	3300

Db	3360	AATGCTATGCTTAGTAGTTAAGGGGTTTTCGAACTCGAGGCTCTATTAACAAGATCTTCTCTGGA	3411
QY	3301	AGTAATGTGAAGCATCTGAAATATAAAAAACAAGATATGAAGAAGTACTTCAGACTGTT	3360
Db	3420	AGTATTTGTAAAGCATCTCGAAATATAAAAAACAAGATATGAAGAAGTACTTCAGACTGTT	3479
QY	3361	AATACAGATTCTCTCCATATCTCGATTTCAGATTAAGTAAGAACAGCCATATGGGAAGTAGT	3420
Db	3480	AATACAGATTCTCTCCATATCTCGATTTCAGATTAAGTAAGAACAGCCATATGGGAAGTAGT	3539
QY	3421	CATGCATCTCAGGTTTGTCTTGAGACACCTGATGACCTGTTAGATGATGTTGAATAAAG	3480
Db	3540	CATGCATCTCAGGTTTGTCTTGAGACACCTGATGACCTGTTAGATGATGTTGAATAAAG	3599
QY	3481	GAAGATACTAGTTTGTGCGAAATAAGACATTAAGAAATCTCGCTTTTATAGCAAAAGC	3540
Db	3600	GAAGATACTAGTTTGTGCGAAATAAGACATTAAGAAATCTCGCTTTTATAGCAAAAGC	3659
QY	3541	GTCCAGAAAGAGAGACTTAGCGAGAGTCTTAGCCCTTTCACCCATATACATTTGGCTCAG	3600
Db	3660	GTCCAGAAAGAGAGACTTAGCGAGAGTCTTAGCCCTTTCACCCATATACATTTGGCTCAG	3719
QY	3601	GTTTACCGAAGGGGGCCCAAGAAATTAAAGTCTTCAGAAAGAACTTTATCTTAAGAGGAT	3660
Db	3720	GTTTACCGAAGGGGGCCCAAGAAATTAAAGTCTTCAGAAAGAACTTTATCTTAAGAGGAT	3779
QY	3661	GAAAGACTCTCCCTGCTTCCAACTCTGTATTGGTTAAAGTAACAAATATACCTCTTCAG	3720
Db	3780	GAAAGACTCTCCCTGCTTCCAACTCTGTATTGGTTAAAGTAACAAATATACCTCTTCAG	3839
QY	3721	TCTACTAGCATAGCACCCTGTCACCGAGTCTCTGCTTAAGAACACAGAGAGAAATTA	3780
Db	3840	TCTACTAGCATAGCACCCTGTCACCGAGTCTCTGCTTAAGAACACAGAGAGAAATTA	3899
QY	3781	TTATCATTTGAAGAATAGCTTAAATATACGACAGTAACCGAGTAATTTTGGCAAGAGCATCT	3840
Db	3900	TTATCATTTGAAGAATAGCTTAAATATACGACAGTAACCGAGTAATTTTGGCAAGAGCATCT	3959
QY	3841	CAGGAACATCACCTTAGTAGAGAAACAAATGTTCTGCTAGCTGTTTCTTCACAGTGC	3900
Db	3960	CAGGAACATCACCTTAGTAGAGAAACAAATGTTCTGCTAGCTGTTTCTTCACAGTGC	4019
QY	3901	AGTGAATTGGGAAGACTTTCAGTCCAAATACCAACCCAGAGATCCCTTCTTATATGGTCT	3960
Db	4020	AGTGAATTGGGAAGACTTTCAGTCCAAATACCAACCCAGAGATCCCTTCTTATATGGTCT	4079
QY	3961	TCCAACAACAATGAGGCATCAGTCTGTGAAGCCAGAGAGTTGGTCTGTAGTGAACAAGAAATTG	4020
Db	4080	TCCAACAACAATGAGGCATCAGTCTGTGAAGCCAGAGAGTTGGTCTGTAGTGAACAAGAAATTG	4139
QY	4021	GTTTAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAAAGACAAAGC	4080
Db	4140	GTTTAGATGATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAAAGACAAAGC	4199
QY	4081	ATGATTTAAACTTGTGTGAAGACACATCTGGGTGTGAGAGTGAAGAACAGCGTCTCGAA	4140
Db	4200	ATGATTTAAACTTGTGTGAAGACACATCTGGGTGTGAGAGTGAAGAACAGCGTCTCGAA	4259
QY	4141	GACTGCTCAGGGCTATCTCTCAGAGTGACATTTTAACTCAGACAGAGAGGATATCCATG	4200
Db	4260	GACTGCTCAGGGCTATCTCTCAGAGTGACATTTTAACTCAGACAGAGAGGATATCCATG	4319
QY	4201	CAACATAACCTGATTAAGCTCAGAGGAATGCTGTAACATGAAGCGTGTTTGAACAG	4260
Db	4320	CAACATAACCTGATTAAGCTCAGAGGAATGCTGTAACATGAAGCGTGTTTGAACAG	4379
QY	4261	CATGGAGACCAGCCTTTAACAGCTACCTTCCATCATTAAGTGAATCTTTCGCCCTTGAG	4320
Db	4380	CATGGAGACCAGCCTTTAACAGCTACCTTCCATCATTAAGTGAATCTTTCGCCCTTGAG	4439
QY	4321	GACCTGGCAATCCAGAACAAAGCATCAGAAAAGAGCATTTATTACTTCACAGAAAAGT	4380
Db	4440	GACCTGGCAATCCAGAACAAAGCATCAGAAAAGAGCATTTATTACTTCACAGAAAAGT	4499

```

QY 4381 AGTGAATACCTTAATACCGAATCCGAAGGCGCTTCTGCTGACAGTTGAGTGTCT 4440
DB 4500 AGTGAATACCTTAATACCGAATCCGAAGGCGCTTCTGCTGACAGTTGAGTGTCT 4559
QY 4441 GCAGATAGTTCTACCACTAATAAATAAGAACACGAGAGTGAAGAGTCCCTCTTAAA 4500
DB 4560 GCAGATAGTTCTACCACTAATAAATAAGAACACGAGAGTGAAGAGTCCCTCTTAAA 4619
QY 4501 TGGCCATCATTTAGATGATAGTGTGATGACAGAGTTGCTGTGGAGTCTTACAGATAGA 4580
DB 4620 TGGCCATCATTTAGATGATAGTGTGATGACAGAGTTGCTGTGGAGTCTTACAGATAGA 4679
QY 4561 AACTACCATCTCTAAGAGAGAGAGTCCATTAAGTTGATGATGGAGAGAGCAACAGCTGAA 4620
DB 4680 AACTACCATCTCTAAGAGAGAGAGTCCATTAAGTTGATGATGGAGAGAGCAACAGCTGAA 4739
QY 4621 GAGTCTGGGCGACACGATTTGACGGAACAATCTTACTTGGCAAGGCAAGATCTAGAGGA 4680
DB 4740 GAGTCTGGGCGACACGATTTGACGGAACAATCTTACTTGGCAAGGCAAGATCTAGAGGA 4799
QY 4681 ACCCCTTACCTGGAATGTGAATCAGCCTCTTCTGTATGACCTGATCTGATCTCT 4740
DB 4800 ACCCCTTACCTGGAATGTGAATCAGCCTCTTCTGTATGACCTGATCTGATCTCT 4859
QY 4741 GAAGACAGAGGCGGACGAGTCCGCTGTGGCAACATACCATCTTCAACCTCGCATTTG 4800
DB 4860 GAAGACAGAGGCGGACGAGTCCGCTGTGGCAACATACCATCTTCAACCTCGCATTTG 4919
QY 4801 AAGATCCCAATTTGAAAGTTGCAAGATCTGCCAGAGTCCAGTCTGCTCATCTACT 4860
DB 4920 AAGATCCCAATTTGAAAGTTGCAAGATCTGCCAGAGTCCAGTCTGCTCATCTACT 4979
QY 4861 GATACCTCTGGGTATTAATGCAATGGAAGAAAGTGTGACGAGGGAAGCAAGATTGACA 4920
DB 4980 GATACCTCTGGGTATTAATGCAATGGAAGAAAGTGTGACGAGGGAAGCAAGATTGACA 5039
QY 4921 GCTTCAACAGAAAGGCTCAACAAAGAAATGTCATGCTGTGCTGACCCCGAA 4980
DB 5040 GCTTCAACAGAAAGGCTCAACAAAGAAATGTCATGCTGTGCTGACCCCGAA 5099
QY 4981 GAATTTATGCTGTGTACAAAGTTGCCAGAAACACCATCATCTTAATCTAAT 5040
DB 5100 GAATTTATGCTGTGTACAAAGTTGCCAGAAACACCATCATCTTAATCTAAT 5159
QY 5041 ACTGAGAGAGCTACTATGTTGTTATGAAACAGATCTGATGTTGTTGTTGAACGACA 5100
DB 5160 ACTGAGAGAGCTACTATGTTGTTATGAAACAGATCTGATGTTGTTGTTGAACGACA 5219
QY 5101 CTGAAATATTTCTAGGAATTTGGGAGGAAATGGGTAGTTAGCTATTTCTGGGTACC 5160
DB 5220 CTGAAATATTTCTAGGAATTTGGGAGGAAATGGGTAGTTAGCTATTTCTGGGTACC 5279
QY 5161 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCAGAGAGATGTG 5220
DB 5280 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATGATTTTGAAGTCAGAGAGATGTG 5339
QY 5221 GTCAATGGAAGAAACCAAGAGTCCAAAGCAGCAAGAAATCCACGACAGAAAGATC 5280
DB 5340 GTCAATGGAAGAAACCAAGAGTCCAAAGCAGCAAGAAATCCACGACAGAAAGATC 5399
QY 5281 TTCAGGGGGCTAGAAATCTGTGCTATGGGCGCTTCCAAACATGGCCACAGATCACTG 5340
DB 5400 TTCAGGGGGCTAGAAATCTGTGCTATGGGCGCTTCCAAACATGGCCACAGATCACTG 5459
QY 5341 GAATGATGTAGAGCTGTGTGCTCTGTGTGTGAAGAGCTTTTCATCTACCCCTT 5400
DB 5460 GAATGATGTAGAGCTGTGTGCTCTGTGTGTGAAGAGCTTTTCATCTACCCCTT 5519
QY 5401 GGACAGAGTGTCCACCAATTTGTGTGTGTCAGCAGCATGCTGTGAGACAGAGCAATGGC 5460
DB 5520 GGACAGAGTGTCCACCAATTTGTGTGTGTCAGCAGCATGCTGTGAGACAGAGCAATGGC 5579

```

```

QY 5461 TTCCATCAATTTGGGAGAGATGTGAGGACCTGTGGTGGAGCCGAGAGTGGTGGAC 5520
DB 5580 TTCCATCAATTTGGGAGAGATGTGAGGACCTGTGGTGGAGCCGAGAGTGGTGGAC 5639
QY 5521 AGTGTACACTCTACCAAGTGGCCAGAGCTGACACCTAAGTATACCCAGATCCCGAC 5580
DB 5640 AGTGTACACTCTACCAAGTGGCCAGAGCTGACACCTAAGTATACCCAGATCCCGAC 5699
QY 5581 AGCCACTAC 5589
DB 5700 AGCCACTAC 5708

```

RESULT 3

```

US-09-074-476-5
Sequence 5, Application US/09074476
Patent No. 6130322
GENERAL INFORMATION:
APPLICANT: Murphy, Patricia D.
APPLICANT: Allen, Antonette C.
APPLICANT: Alvarez, Christopher P.
APPLICANT: Critz, Brenda S.
APPLICANT: Olson, Sheri J.
APPLICANT: Thurber, Denise
APPLICANT: Zeng, Bin
TITLE OF INVENTION: Coding Sequences of the Human
NUMBER OF SEQUENCES: 72
CORRESPONDENCE ADDRESS:
ADDRESSEE: Howrey & Simon
STREET: 1299 Pennsylvania Avenue N. W.
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20004
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentln Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/074,476
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/074,453
FILING DATE:
ATTORNEY/AGENT INFORMATION:
NAME: Albert P. Halluin
REGISTRATION NUMBER: 25,227
REFERENCE/DOCKET NUMBER: 5371.34.US01
TELECOMMUNICATION INFORMATION:
TELEPHONE: 650-463-8109
TELEFAX: 650-463-8400
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 5711 base pairs
TYPE: nucleic acid
STRANDEDNESS: not relevant
TOPOLOGY: linear
MOLECULE TYPE: cDNA
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
STRAIN: BRCAL (Om13)
POSITION IN GENOME:
CHROMOSOME/SEGMENT: 17
MAP POSITION: 17q21
US-09-074-476-5
Query Match 100.0%; Score 5587.4; DB 3; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5588; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

QY 1 ATGATTTATCTGCTTCCGCTTGAAGAGTACAAAATGCTATTATGCTTGCAGAA 60
Db 120 ATGAGTTTATCTGCTTCCGGTTGAGAAAGTACAAAATGCTATTATGCTTGCAGAA 179
QY 61 ATCTTAGAGTGTCCTCATCTGCTGAGTTGATCAAGAAAGCTGTCCTCCAAAGTGTCAG 120
Db 180 ATCTTAGAGTGTCCTCATCTGCTGAGTTGATCAAGAAAGCTGTCCTCCAAAGTGTCAG 239
QY 121 CACATATTTTGCATAATTTGCAATGCTGAAACTTTCACACAGAGAAAGGGCTTCACAG 180
Db 240 CACATATTTTGCATAATTTGCAATGCTGAAACTTTCACACAGAGAAAGGGCTTCACAG 299
QY 181 TGCTCTTTATGTAAGAAATGATATACCAAAAGAGCTTCACAAAGATACGATTTTACT 240
Db 300 TGCTCTTTATGTAAGAAATGATATACCAAAAGAGCTTCACAAAGATACGATTTTACT 359
QY 241 CAACCTGTTGAAGAGCTATGTAAGAAATCAATTTGCTTTTACCTTGACACAGGTTTGGAG 300
Db 360 CAACCTGTTGAAGAGCTATGTAAGAAATCAATTTGCTTTTACCTTGACACAGGTTTGGAG 419
QY 301 TATGCAAAACAGCTATATATTTTGCAGAAAGAAATTAACCTCTCTGAACATCTAAAGAT 360
Db 420 TATGCAAAACAGCTATATATTTTGCAGAAAGAAATTAACCTCTCTGAACATCTAAAGAT 479
QY 361 GAATTTCTATCATCCCAAGATATGGGCTACAGAAACCGTCCCAAGAGCTTCTACAGAGT 420
Db 480 GAATTTCTATCATCCCAAGATATGGGCTACAGAAACCGTCCCAAGAGCTTCTACAGAGT 539
QY 421 GAACCCGAAATTCCTCTCTGAGGAAACAGTCTCAGTCCCACTCTTAACCTTGA 480
Db 540 GAACCCGAAATTCCTCTCTGAGGAAACAGTCTCAGTCCCACTCTTAACCTTGA 599
QY 481 ACTGTGAGAACTGTGAGAGCAAAAGCAGGATACAACTCAAAAGAGCTCTGTACATTT 540
Db 600 ACTGTGAGAACTGTGAGAGCAAAAGCAGGATACAACTCAAAAGAGCTCTGTACATTT 659
QY 541 GAATTTGAGATGATCTCTTCTGAGAGATACCGTTAATAGGCAACTTATGCGAGTGGGA 600
Db 660 GAATTTGAGATGATCTCTTCTGAGAGATACCGTTAATAGGCAACTTATGCGAGTGGGA 719
QY 601 GATCAAGAAATTTTACAATACCCCTCAAGAAACAGGATGAATCATGTTGATTTCT 660
Db 720 GATCAAGAAATTTTACAATACCCCTCAAGAAACAGGATGAATCATGTTGATTTCT 779
QY 661 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGAGCGATGTACAAATACGAAATCATCA 720
Db 780 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGAGCGATGTACAAATACGAAATCATCA 839
QY 721 CCCAGTAAATATGATTTGAACACACACAGAGAGCTGAGAGAGCTGAGAGAGCTGAGAGAG 780
Db 840 CCCAGTAAATATGATTTGAACACACACAGAGAGCTGAGAGAGCTGAGAGAGCTGAGAGAG 899
QY 781 TATCAGAGGTAGTCTGTTTCAAACTTGATGTGAGAGCATGTGAGCAAAATACTCATGCC 840
Db 900 TATCAGAGGTAGTCTGTTTCAAACTTGATGTGAGAGCATGTGAGCAAAATACTCATGCC 959
QY 841 AGCTCATTTACAGCATGAGACAGAGATTATTTACTCAATAAGACAGATGATGTAGAA 900
Db 960 AGCTCATTTACAGCATGAGACAGAGATTATTTACTCAATAAGACAGATGATGTAGAA 1019
QY 901 AAGGCTGAATTTCTGTAATTAAGAAACAGAGCTGGCTTAGCAAGAGCAATATACAGA 960
Db 1020 AAGGCTGAATTTCTGTAATTAAGAAACAGAGCTGGCTTAGCAAGAGCAATATACAGA 1079
QY 961 TGGGCTGGAAGTAAGAAACATGTATGATAGGCGAGATCCAGACAGAGAAAGAGTA 1020
Db 1080 TGGGCTGGAAGTAAGAAACATGTATGATAGGCGAGATCCAGACAGAGAAAGAGTA 1139
QY 1021 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAAATGCGCATGC 1080
Db 1140 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAAATGCGCATGC 1199
QY 1081 TCAGAGAAATCTCTAGAGATACAGAAAGATGTTCTTGTGATTAACATTAATAGCAGATTCAG 1140

Db 1200 TCAGAGAAATCTCTAGAGATACAGAAAGATGTTCTTGTGATTAACATTAATAGCAGATTCAG 1259
QY 1141 AAGGTTAATGAGTGCTTTTCCAGAGTATGAGTAAGCTGTAGTTGATGATCTCATGAT 1200
Db 1260 AAGGTTAATGAGTGCTTTTCCAGAGTATGAGTAAGCTGTAGTTGATGATCTCATGAT 1319
QY 1201 GGGGAGCTGTAATCAATGCCAAAGTACGTATGTATGAGCGTTCTTAATGAGTATGAT 1260
Db 1320 GGGGAGCTGTAATCAATGCCAAAGTACGTATGTATGAGCGTTCTTAATGAGTATGAT 1379
QY 1261 GAATATTTGCTTCTTCCAGAGAAATTAACCTTACGTGGCATGATCCCATGAGAGCTTTA 1320
Db 1380 GAATATTTGCTTCTTCCAGAGAAATTAACCTTACGTGGCATGATCCCATGAGAGCTTTA 1439
QY 1321 ATATGTAAGAGGAAAGAGTTCACCTCAAACTAGTAGAGATATATTTGAAGCAAAATA 1380
Db 1440 ATATGTAAGAGGAAAGAGTTCACCTCAAACTAGTAGAGATATATTTGAAGCAAAATA 1499
QY 1381 TTTGGGAAACCTATCGGAGAGGCAAGCTCCCAACTTAAGCCATGTATGTAAT 1440
Db 1500 TTTGGGAAACCTATCGGAGAGGCAAGCTCCCAACTTAAGCCATGTATGTAAT 1559
QY 1441 CTAAATTAAGAGCATTTTGTACTAGAGCCACAGATTAATACAAAGCCGCTCCCTACAAAT 1500
Db 1560 CTAAATTAAGAGCATTTTGTACTAGAGCCACAGATTAATACAAAGCCGCTCCCTACAAAT 1619
QY 1501 AAATTAAGAGGTAAGAGAGACCTCATCAGAGCCCTCATCTGAGATTTTATCAAAA 1560
Db 1620 AAATTAAGAGGTAAGAGAGACCTCATCAGAGCCCTCATCTGAGATTTTATCAAAA 1679
QY 1561 GCAGATTTGGCAGTTCAAAAGAGCTCTGAAATGATTAATCAGGAACTAACCAAGCGAG 1620
Db 1680 GCAGATTTGGCAGTTCAAAAGAGCTCTGAAATGATTAATCAGGAACTAACCAAGCGAG 1739
QY 1621 CAGATTTGCTCAAGTATGAATTTTACTTAATAGTGTCTATGAGATTAACCAAGAGTAT 1680
Db 1740 CAGATTTGCTCAAGTATGAATTTTACTTAATAGTGTCTATGAGATTAACCAAGAGTAT 1799
QY 1681 TCTATTGAGATGAGAAATAATCTTAACCAATAGATACCTGAGAAAGAAATGCTGCTTTC 1740
Db 1800 TCTATTGAGATGAGAAATAATCTTAACCAATAGATACCTGAGAAAGAAATGCTGCTTTC 1859
QY 1741 AAACGAAAGCTGAACCTATTAAGACAGCATATTAAGCAATATGAGTAAGCTGAAATATATC 1800
Db 1860 AAACGAAAGCTGAACCTATTAAGACAGCATATTAAGCAATATGAGTAAGCTGAAATATATC 1919
QY 1801 CACATTTGAAAGAGCACTTAAGAAAGATGAGTGTGAGAGAGATGTTCTTACAGGCAATAT 1860
Db 1920 CACATTTGAAAGAGCACTTAAGAAAGATGAGTGTGAGAGAGATGTTCTTACAGGCAATAT 1979
QY 1861 CATGGCTTGAAGTATGATGATGAGAAATTAAGCCACCTAATTTGATGATTTGCAA 1920
Db 1980 CATGGCTTGAAGTATGATGATGAGAAATTAAGCCACCTAATTTGATGATTTGCAA 2039
QY 1921 ATGTATGATTTTCTAGCAGTGAAGAGATTAAGCAAAAGATTAAGCAAAATGCCAGTTC 1980
Db 2040 ATGTATGATTTTCTAGCAGTGAAGAGATTAAGCAAAAGATTAAGCAAAATGCCAGTTC 2099
QY 1981 AGGACAGACAGAAACCTTAACATCATGGAAGGTAAAGAACCTGAACTGAGAGCAAGAG 2040
Db 2100 AGGACAGACAGAAACCTTAACATCATGGAAGGTAAAGAACCTGAACTGAGAGCAAGAG 2159
QY 2041 AGTAACAGAGCCAAATGAAAGACAGAAAGTAAAGAGATGAGTATGTTTCCAGAGAGCT 2100
Db 2160 AGTAACAGAGCCAAATGAAAGACAGAAAGTAAAGAGATGAGTATGTTTCCAGAGAGCT 2219
QY 2101 AAGTTAACAAATGCAAGCTGCTTTTACTTAAGTGTTCATTAATACAGTGAATTAAGAA 2160
Db 2220 AAGTTAACAAATGCAAGCTGCTTTTACTTAAGTGTTCATTAATACAGTGAATTAAGAA 2279
QY 2161 TTTGTCAATCTTACCTTCCAGAGAGAAAGAAAGAAAGAACTAGAAACAGTTAAAGTG 2220

Db	2280	TTTGTGCAATCCTACGCTTCCTCAAGAGAAAGAAAAGAAAGAAACTAGAAACAGCTTAAAGTG	2339
OY	2221	TCATATAATGCTGAGAAGACCCCAAGATCTCATGTTTAAGTGGAGAAAGGTTTTCCAACT	2280
Db	2340	TCATATAATGCTGAGAAGACCCCAAGATCTCATGTTTAAGTGGAGAAAGGTTTTCCAACT	2399
OY	2281	GAAAGATCTGTAGAGAGTAGACAGATATTTTCATTTGGTACCTGGTACTGATATATGACACTCAG	2340
Db	2400	GAAAGATCTGTAGAGAGTAGACAGATATTTTCATTTGGTACCTGGTACTGATATATGACACTCAG	2459
OY	2341	GAAAGTATCTGCTACTGGAAGTTAGACCTGTAGGAAAGGCAAAACAGAACCAATATAA	2400
Db	2460	GAAAGTATCTGCTACTGGAAGTTAGACCTGTAGGAAAGGCAAAACAGAACCAATATAA	2519
OY	2401	TGTGTGAGTCAAGTGTGAGCATTTTGGAAAACCCCAAGGAGCACTAATTCATGTGTTTCCAAA	2460
Db	2520	TGTGTGAGTCAAGTGTGAGCATTTTGGAAAACCCCAAGGAGCACTAATTCATGTGTTTCCAAA	2579
OY	2461	GATATATGAAATGACACACAGAAAGCCTTTAAGTATCCATTGGGACATGAAATTAAACACAGT	2520
Db	2580	GATATATGAAATGACACAGAAAGCCTTTAAGTATCCATTGGGACATGAAATTAAACACAGT	2639
OY	2521	CGGGAACCAACATAGAGAAATGSAAGAAAGTAACTGATGCTGCTATTTGCACAAATACA	2580
Db	2640	CGGGAACCAACATAGAGAAATGSAAGAAAGTAACTGATGCTGCTATTTGCACAAATACA	2699
OY	2581	TTCAAGGTTTCAAAAGCGGCAGTCAATTTGCTCTGTGTTTCAATCCAGGAAATGCAAGAGAG	2640
Db	2700	TTCAAGGTTTCAAAAGCGGCAGTCAATTTGCTCTGTGTTTCAATCCAGGAAATGCAAGAGAG	2759
OY	2641	GAATGTGCACATTTCTCTGCCACTCTGCGGTCTTTAAAGAAACAAAGTCCAAAAGTCACT	2700
Db	2760	GAATGTGCACATTTCTCTGCCACTCTGCGGTCTTTAAAGAAACAAAGTCCAAAAGTCACT	2819
OY	2701	TTTGAATGTGCACAAAAGAAAGAAATCAAGAGAAAGATGATGATTAATATCAAGCTCTGA	2760
Db	2820	TTTGAATGTGCACAAAAGAAAGAAATCAAGAGAAAGATGATGATTAATATCAAGCTCTGA	2879
OY	2761	CAGACAGTTAATATCACTGCAGGCTTCTGTGTGGTGGTCAGAAAAGATAAAGCCAGTTGAT	2820
Db	2880	CAGACAGTTAATATCACTGCAGGCTTCTGTGTGGTGGTCAGAAAAGATAAAGCCAGTTGAT	2939
OY	2821	AATGCCAAATGTACTATCAAAAGAGGCGCTTAGTTTTGTCTATCATCTCAAGTTCAGAGCC	2880
Db	2940	AATGCCAAATGTACTATCAAAAGAGGCGCTTAGTTTTGTCTATCATCTCAAGTTCAGAGCC	2999
OY	2881	AAGCAAACTGGACATCTACTCCAAATTAACATGAGCTTTTACAAAACCCATATCGTATA	2940
Db	3000	AAGCAAACTGGACATCTACTCCAAATTAACATGAGCTTTTACAAAACCCATATCGTATA	3059
OY	2941	CCACCACCTTTTCCCATCATCAGTCAATTTGTAAAACCTAAATGTAGAAAATCTGCTAGAG	3000
Db	3060	CCACCACCTTTTCCCATCATCAGTCAATTTGTAAAACCTAAATGTAGAAAATCTGCTAGAG	3119
OY	3001	GAAAACCTTTGAGGAACATTCATGTCACTGAGAAAGAGAAATGGGAAATGAGAACATTCCA	3060
Db	3120	GAAAACCTTTGAGGAACATTCATGTCACTGAGAAAGAGAAATGGGAAATGAGAACATTCCA	3179
OY	3061	AGTACATGAGCACAATTTAGCCCGTAATTAACATTGAGAAAATGTTTTTAAAGAACGACG	3120
Db	3180	AGTACATGAGCACAATTTAGCCCGTAATTAACATTGAGAAAATGTTTTTAAAGAACGACG	3239
OY	3121	TCAAGCAATATTAATGAGTAGTTCAGTCCAGTACTAATGAGTGGGCTCCAGTATTAATGAA	3180
Db	3240	TCAAGCAATATTAATGAGTAGTTCAGTCCAGTACTAATGAGTGGGCTCCAGTATTAATGAA	3299
OY	3181	ATAGGTTCCAGTATGAGAAAACATTCAACAGAGAACCTAGGTAGAAAACAGAGGGCCAAAATTG	3240
Db	3300	ATAGGTTCCAGTATGAGAAAACATTCAACAGAGAACCTAGGTAGAAAACAGAGGGCCAAAATTG	3359
OY	3241	AATCTCTATGCTTAATTAATTAGGGTTTTGCAACCTGAGGCTATATAACAAAGCTTCTCTGGA	3300
Db	3360	AATCTCTATGCTTAATTAATTAGGGTTTTGCAACCTGAGGCTATATAACAAAGCTTCTCTGGA	3419

QY	3301	AGTAATTGTAAAGCATCTCGAATATATAAAGACAATATGAGAAGTAGTTCAGACTGTT	3360
Db	3420	AGTAATTGTAAAGCATCTCGAATATATAAAGACAATATGAGAAGTAGTTCAGACTGTT	3479
QY	3361	AATACAGATTCTCTCCATCTCATATTTCACATPACTTAGAACAGCCATGGGAAGT	3420
Db	3480	AATACAGATTCTCTCCATCTCATATTTCACATPACTTAGAACAGCCATGGGAAGT	3539
QY	3421	CATGCATCTCAGTTTGTTGTCGAGACACCTGATACCTGTTAGATGATGGTAATTAAG	3480
Db	3540	CATGCATCTCAGTTTGTTGTTGTCGAGACACCTGATACCTGTTAGATGATGGTAATTAAG	3599
QY	3481	GAAGATPACTAGTTTGGTGAATAATGACATTTAAGAAAGTCTGTTTTTATGCAAAAGC	3540
Db	3600	GAAGATPACTAGTTTGGTGAATAATGACATTTAAGAAAGTCTGTTTTTATGCAAAAGC	3659
QY	3541	GTCACAAAGAGAGAGCTTAGACAGAGAGTCTAGCCCTTTCACCCCTTATACATATTGGCTCAG	3600
Db	3660	GTCACAAAGAGAGAGCTTAGACAGAGAGTCTAGCCCTTTCACCCCTTATACATATTGGCTCAG	3719
QY	3601	GGTTACCGAAGAGGGGCCAAGAAATTTAGAGTCTCAGAGAAGAACTTATCTAGAGAGAT	3660
Db	3720	GGTTACCGAAGAGGGGCCAAGAAATTTAGAGTCTCAGAGAAGAACTTATCTAGAGAGAT	3779
QY	3661	GAGAGAGTCTCCCTGCTTCCAACACTGTTATTGTTGGTAAAGTAAACATATACCTTCTCAG	3720
Db	3780	GAGAGAGTCTCCCTGCTTCCAACACTGTTATTGTTGGTAAAGTAAACATATACCTTCTCAG	3839
QY	3721	TCTACTAGCAGTAGACCGTGTGTCACGAGTGTGTCCTAGAACACAGAGAGAAATTTA	3780
Db	3840	TCTACTAGCAGTAGACCGTGTGTCACGAGTGTGTCCTAGAACACAGAGAGAAATTTA	3899
QY	3781	TTATCATTTGAAGAAATAGCTTAATGACTGTGACGTACAGTAACAGGTAATATTGGCAAGGCACT	3840
Db	3900	TTATCATTTGAAGAAATAGCTTAATGACTGTGACGTACAGTAACAGGTAATATTGGCAAGGCACT	3959
QY	3841	CAGAGAACTACACTTATAGTGAAGAAACAAATAGTCTGTGACTGTTTCTTCTACACTGC	3900
Db	3960	CAGAGAACTACACTTATAGTGAAGAAACAAATAGTCTGTGACTGTTTCTTCTACACTGC	4019
QY	3901	AGTGAATTTGGAAGACTTGACTGCAAAATTAACAACACCCAGAGTCCCTTCTTGATGGTCT	3960
Db	4020	AGTGAATTTGGAAGACTTGACTGCAAAATTAACAACACCCAGAGTCCCTTCTTGATGGTCT	4079
QY	3961	TCCAACCAATAGAGCATCACTGTGAAGACCAGGAGTGGTCTGAGTGAACAAGAAATG	4020
Db	4080	TCCAACCAATAGAGCATCACTGTGAAGACCAGGAGTGGTCTGAGTGAACAAGAAATG	4139
QY	4021	GTTTCAGATGATGAAGAAAGAGAACGGGCTTGGAGAATAATTAACAAGAGCAAAAGC	4080
Db	4140	GTTTCAGATGATGAAGAAAGAGAACGGGCTTGGAGAATAATTAACAAGAGCAAAAGC	4199
QY	4081	ATGGAATTCAAACTTAGGTGAAGCAGCAATCTGGGTGTGAGAGTGAACAAGGTCGTGAA	4140
Db	4200	ATGGAATTCAAACTTAGGTGAAGCAGCAATCTGGGTGTGAGAGTGAACAAGGTCGTGAA	4259
QY	4141	GACTGCTCAGGGCTATCCTCTCAGAGTGACATTTTAAACCACTCAGCAGAGGATACCATG	4200
Db	4260	GACTGCTCAGGGCTATCCTCTCAGAGTGACATTTTAAACCACTCAGCAGAGGATACCATG	4319
QY	4201	CAACATATACCTGATTAAGCTTCCACAGAGAAATGGCTGAATCTAAGAAAGCTGTGTGAACAG	4260
Db	4320	CAACATATACCTGATTAAGCTTCCACAGAGAAATGGCTGAATCTAAGAAAGCTGTGTGAACAG	4379
QY	4261	CATGGAGGCCAGCCTTCTTACAGGTACCCCTTCCATCACTTAAGTGTACTTTCTGCCCTTGAG	4320
Db	4380	CATGGAGGCCAGCCTTCTTACAGGTACCCCTTCCATCACTTAAGTGTACTTTCTGCCCTTGAG	4439
QY	4321	GACCTGGCAATTCAGAAACAAGCACAATCGAATAAAGCAGATATTAACTTACAGAAAGT	4380
Db	4440	GACCTGGCAATTCAGAAACAAGCACAATCGAATAAAGCAGATATTAACTTACAGAAAGT	4499

QY 4381 AGTGAATACCTATAGCCAGAAATCCAGAGGCCCTTCTGCTGACAAAGTTGAGGTGCT 4440
DB 4500 AGTGAATACCTATAGCCAGAAATCCAGAGGCCCTTCTGCTGACAAAGTTGAGGTGCT 4559
QY 4441 GCAGTACTTCTACCAAGTAAATAAGAACAGAGTGGAAAGGTCATCCCTTTAA 4500
DB 4500 GCAGTACTTCTACCAAGTAAATAAGAACAGAGTGGAAAGGTCATCCCTTTAA 4619
QY 4501 TGCCATCATTTAGATAGTGTGCTACATGACAGTGTGCTGGAGTCTTCAGATAGA 4560
DB 4620 TGCCATCATTTAGATAGTGTGCTACATGACAGTGTGCTGGAGTCTTCAGATAGA 4679
QY 4561 AACTACCATCTCAAGAGAGAGCTCATTAAGTTGATGTGAGAGCAACAGCTGAA 4620
DB 4680 AACTACCATCTCAAGAGAGAGCTCATTAAGTTGATGTGAGAGCAACAGCTGAA 4739
QY 4621 GAGTCTGGGCAACAGATTTGCGAAACATCTTCTGCGCAAGCAACATCTAGAGGA 4680
DB 4740 GAGTCTGGGCAACAGATTTGCGAAACATCTTCTGCGCAAGCAACATCTAGAGGA 4799
QY 4681 ACCCTTACCTGGAATCTGGAATCAGCCTCTTCTGATGACCTGATCTGCTCT 4740
DB 4800 ACCCTTACCTGGAATCTGGAATCAGCCTCTTCTGATGACCTGATCTGCTCT 4859
QY 4741 GAAGACAGAGCCCAAGAGTCACTGCTGTGGCAACATACATCTTCAACCTCTGCATG 4800
DB 4860 GAAGACAGAGCCCAAGAGTCACTGCTGTGGCAACATACATCTTCAACCTCTGCATG 4919
QY 4801 AAGTCTCCCAATTAAGTTGCAATCTGCCAGAGTCCAGCTGCTGCTATCTACT 4860
DB 4920 AAGTCTCCCAATTAAGTTGCAATCTGCCAGAGTCCAGCTGCTGCTATCTACT 4979
QY 4861 GATACTGCTGGTATATGCAATGAGAAAGTGTGACAGAGGAGAGCAAAATGACA 4920
DB 4980 GATACTGCTGGTATATGCAATGAGAAAGTGTGACAGAGGAGAGCAAAATGACA 5039
QY 4921 GCTTCACAGAAAGGTCACAAAAGATGTCATGCTGCTGCTGCTGCTGCTGCTGCT 4980
DB 5040 GCTTCACAGAAAGGTCACAAAAGATGTCATGCTGCTGCTGCTGCTGCTGCTGCTGCT 5099
QY 4981 GAATTTATGCTGCTGATCAAGTTGCGAAAGACCAACATCTTAACTAATCTAAT 5040
DB 5100 GAATTTATGCTGCTGATCAAGTTGCGAAAGACCAACATCTTAACTAATCTAAT 5159
QY 5041 ACTGAAGAGTACTCATGTTGTTATGAAAACAGATGCTGAGTTGTGTGTAACGACA 5100
DB 5160 ACTGAAGAGTACTCATGTTGTTATGAAAACAGATGCTGAGTTGTGTGTAACGACA 5219
QY 5101 CTGAATATTTTCAAGAAATGCGGAGGAAATGGTATGATCTATTTCTGGGTGAC 5160
DB 5220 CTGAATATTTTCAAGAAATGCGGAGGAAATGGTATGATCTATTTCTGGGTGAC 5279
QY 5161 CAGTCTATTTAAGAAAGAAATGCTGAATGAGATGATTTTGAATCAGAGAGATGTG 5220
DB 5280 CAGTCTATTTAAGAAAGAAATGCTGAATGAGATGATTTTGAATCAGAGAGATGTG 5339
QY 5221 GTCAATGGAAGAAACCAAGGTCACAAAGGAGAGAGATCCAGAGAGAAAGATC 5280
DB 5340 GTCAATGGAAGAAACCAAGGTCACAAAGGAGAGAGATCCAGAGAGAAAGATC 5399
QY 5281 TTGCGGGGGGTAGAAATCTGTTGCTATGCGGCTTCCACCAACATGCCCAGATCACTG 5340
DB 5400 TTGCGGGGGGTAGAAATCTGTTGCTATGCGGCTTCCACCAACATGCCCAGATCACTG 5459
QY 5341 GAATGATGATGACAGTGTGCTGCTCTGCTGGAAGAGCTTCAATCACTCCCTT 5400
DB 5460 GAATGATGATGACAGTGTGCTGCTCTGCTGGAAGAGCTTCAATCACTCCCTT 5519
QY 5401 GGACAGAGTGTCAACCAATTTGCTGTGACAGCAGATGCTTGACAGAGAGACATGGC 5460
DB 5520 GGACAGAGTGTCAACCAATTTGCTGTGACAGCAGATGCTTGACAGAGAGACATGGC 5579
QY 5461 TTCCATGCAATTTGGGAGATGTGTGAGGCACTGCTGTGAGCCAGAGTGGGTGTGAC 5520

DB 5580 TTCATGCAATTTGGGAGATGTGTGAGGACACTGTGTGAGCCGAGAGTGGGTGTGAC 5639
QY 5521 AGTGTAGCACTCTACCAAGTCCAGAGAGTGTGACACACTTACCTGATATCCCAATCCCCAC 5580
DB 5640 AGTGTAGCACTCTACCAAGTCCAGAGAGTGTGACACACTTACCTGATATCCCAATCCCCAC 5699
QY 5581 AGCCACTAC 5589
DB 5700 AGCCACTAC 5708

RESULT 4
US-08-658-322-1
; Sequence 1, Application us/08658322
; Patent No. 5869245
; GENERAL INFORMATION:
; APPLICANT: Yeung, Anthony T.
; TITLE OF INVENTION: Mismatch Endonuclease And Its Use In
; TITLE OF INVENTION: Identifying Mutations In Targeted Polynucleotide Strands
; NUMBER OF SEQUENCES: 13
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Dann, Dorfman, Herrell and Skillman, P.C.
; STREET: 1601 Market Street, Suite 720
; CITY: Philadelphia
; STATE: PA
; COUNTRY: USA
; ZIP: 19103-2307
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/658,322
; FILING DATE: 05-JUN-1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: Hagan, Patrick J.
; REGISTRATION NUMBER: 27,643
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: (215) 563-4100
; TELEFAX: (215) 563-4044
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 5711 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: not relevant
; MOLECULE TYPE: DNA (genomic)
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; US-08-658-322-1

Query Match 99.9%; Score 5585.8; DB 2; Length 5711;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGATTAATGCTGCTTCCGCTGGAAGAGTACAAAATGCAATTAATGATGACGAGAA 60
DB 120 ATGGATTAATGCTGCTTCCGCTGGAAGAGTACAAAATGCAATTAATGATGACGAGAA 179
QY 61 ATCTTAGAGTCTCCATCTGCTGAGTGTATCAAGAACCTGCTCCACAAAGTGTGAC 120
DB 180 ATCTTAGAGTCTCCATCTGCTGAGTGTATCAAGAACCTGCTCCACAAAGTGTGAC 239
QY 121 CACATATTTTGAATTTTGTGATGCTGAACCTTCTCAACAGAAAGAGGCTTACAG 180
DB 240 CACATATTTTGAATTTTGTGATGCTGAACCTTCTCAACAGAAAGAGGCTTACAG 299
QY 181 TGCTCTTAATGATGATATTAACCAAGAGGCTTACAAAGATGATGATTTAGT 240
DB 300 TGCTCTTAATGATGATATTAACCAAGAGGCTTACAAAGATGATGATTTAGT 359

4621 GAGTCTGGGGCCACAGATTGACGGAACATCTTACTTGCCCAAGCAGATCTAGAGGA 4680
4740 GAGTCTGGGGCCACAGATTGACGGAACATCTTACTTGCCCAAGCAGATCTAGAGGA 4799
4681 ACCCTTACCTGGAATCTGGAATGAGCTCTCTCTCTGATGAGACCTGAACTGATCTCT 4740
4800 ACCCTTACCTGGAATCTGGAATGAGCTCTCTCTCTGATGAGACCTGAACTGATCTCT 4859
4741 GAAGCAGAGGCCACAGATGAGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 4800
4860 GAAGCAGAGGCCACAGATGAGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTG 4919
4801 AAAGTCTCCCAATGGAAGTTCAGAAATCTCCCAAGATGCTGCTGCTGCTGCTGCTGCT 4860
4920 AAAGTCTCCCAATGGAAGTTCAGAAATCTCCCAAGATGCTGCTGCTGCTGCTGCTGCT 4979
4861 GATACCTGCTGGGTATATGCAATGGAAGAAAGTGTGACAGAGGAGAAACCAAGATGACA 4920
4980 GATACCTGCTGGGTATATGCAATGGAAGAAAGTGTGACAGAGGAGAAACCAAGATGACA 5039
4921 GCTTCACAGAAAGGCTCAACAAAGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 4980
5040 GCTTCACAGAAAGGCTCAACAAAGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5099
4981 GAATTTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5040
5100 GAATTTATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5159
5041 ACTGAGAGACTACTCATGTTGTTATGAAACAGATGCTGCTGCTGCTGCTGCTGCTGCTGCT 5100
5160 ACTGAGAGACTACTCATGTTGTTATGAAACAGATGCTGCTGCTGCTGCTGCTGCTGCTGCT 5219
5101 CTGAAATTTTCTGAGGAATGCGGGAGGAAATGGGATGTTAGTATTTCTGGGTGACC 5160
5220 CTGAAATTTTCTGAGGAATGCGGGAGGAAATGGGATGTTAGTATTTCTGGGTGACC 5279
5161 CAGCTATTTAAAGAAAGAAATGCTGATGAGCATGATTTTGAAGTACAGAGAGATGTG 5220
5280 CAGCTATTTAAAGAAAGAAATGCTGATGAGCATGATTTTGAAGTACAGAGAGATGTG 5339
5221 GTCATGAGAGAAACCCACCAAGTCCAAAGCGAGCAAGAGAATCCACAGAGAGAAATGTC 5280
5340 GTCATGAGAGAAACCCACCAAGTCCAAAGCGAGCAAGAGAATCCACAGAGAGAAATGTC 5399
5281 TTCAGGGGGCTAGAAATCTGTTGCTATGAGGCTTCCACCAACATGCCCACAGATCACTG 5340
5400 TTCAGGGGGCTAGAAATCTGTTGCTATGAGGCTTCCACCAACATGCCCACAGATCACTG 5459
5341 GAATGATGATGACAGCTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5400
5460 GAATGATGATGACAGCTGTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5519
5401 GGCACAGGTGTCACCAATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5460
5520 GGCACAGGTGTCACCAATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5579
5461 TTCATGCAATTTGGGAGATGTGTGAGGCACTTGTGTGAGACCCAGAGAGTGGGTGTGAC 5520
5580 TTCATGCAATTTGGGAGATGTGTGAGGCACTTGTGTGAGACCCAGAGAGTGGGTGTGAC 5639
5521 AGTGTACACTCTTACCAATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5580
5640 AGTGTACACTCTTACCAATTTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 5699
5581 AGCCACTAC 5589
5700 AGCCACTAC 5708

RESULT 5
US-08-603-753D-1
; Sequence 1, Application US/08603753D

Patent No. 5891857
GENERAL INFORMATION:
APPLICANT: HOLT, JEFFREY T.
APPLICANT: JENSEN, ROY A.
APPLICANT: PAGE, DAVID L.
APPLICANT: KING, MARY-CLAIRE
APPLICANT: SZABO, CHILA I.
APPLICANT: JETTON, THOMAS L.
APPLICANT: ROBINSON-BENION, CHERYL L.
TITLE OF INVENTION: CHARACTERIZED BRCA1 AND BRCA2
TITLE OF INVENTION: PROTEINS AND SCREENING AND THERAPEUTIC METHODS BASED ON
TITLE OF INVENTION: CHARACTERIZED BRCA1 AND BRCA2 PROTEINS.
NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
ADDRESSEE: ARLES A. TAYLOR, JR.
STREET: SUITE 1401, UNIVERSITY TOWER, 3100 TOWER
CITY: DURIHAM
STATE: NORTH CAROLINA
COUNTRY: USA
ZIP: 27707
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 800 kb storage
COMPUTER: IBM PC/XT/AT compatible
OPERATING SYSTEM: Windows 3.1
SOFTWARE: WORD PERFECT 6.1 and ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/603,753D
FILING DATE: 20 FEB 1996
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U.S. 08/373,799
FILING DATE: 17 JAN 1995
ATTORNEY/AGENT INFORMATION:
NAME: ARLES A. TAYLOR, JR.
REGISTRATION NUMBER: 39,395
REFERENCE/DOCKET NUMBER: 1242/2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 493-8000
TELEFAX: (919) 419-0383
TELEX:
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5712
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA to mRNA
HYPOTHETICAL: no
ANTI-SENSE: no
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
INDIVIDUAL ISOLATE:
DEVELOPMENTAL STAGE: adult
TISSUE TYPE: female breast
CELL TYPE: ductal carcinoma in situ, invasive
CELL LINE: not derived from a cell line
ORGANELLE: no
IMMEDIATE SOURCE:
LIBRARY: cDNA library derived from human
CLONE: obtained using published sequence
POSITION IN GENOME:
CHROMOSOME/SEGMENT: unknown
MAP POSITION: unknown
UNITS: unknown
FEATURE:
NAME/KEY: BRCA1
LOCATION: GenBank accession no. U14680
IDENTIFICATION METHOD: microscopically directed
IDENTIFICATION METHOD: sampling and nuclease protection assay
OTHER INFORMATION: gene encoding BRCA1 protein

PUBLICATION INFORMATION:

AUTHORS: Miki, Y., et. al.

TITLE: A strong candidate gene for the breast and
ovarian cancer susceptibility gene BRCA1.

JOURNAL: Science

VOLUME: 286

PAGES: 66-71

DATE: 1994

RELEVANT RESIDUES IN SEQ ID NO: 1:

US-08-603-753D-1

Query Match 99.9%; Score 5585.8; DB 2; Length 5712;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

1 ATGATTATATCTGCTCGGCTTGAAGAGTACAAAATGCTATATGCTATGAGAA 60
120 ATGATTATATCTGCTCGGCTTGAAGAGTACAAAATGCTATATGCTATGAGAA 179
61 ATCTTAGAGTGTCCATCTGTCTGAGTTCAGAGAACTGTCTCCACAAGTGTGAC 120
180 ATCTTAGAGTGTCCATCTGTCTGAGTTCAGAGAACTGTCTCCACAAGTGTGAC 239
121 CACATATTTTGCATATTTGCTGATGCTGAACTTCTCAACAGAGAAAGGCTTACAG 180
240 CACATATTTTGCATATTTGCTGATGCTGAACTTCTCAACAGAGAAAGGCTTACAG 299
181 TGCTCTTATAGTAATGATATTAACCAAGAGAGCTTACAGAAAGTACAGATTTAGT 240
300 TGCTCTTATAGTAATGATATTAACCAAGAGAGCTTACAGAAAGTACAGATTTAGT 359
241 CACATTTTGAAGAGCTATTTGAATCAATTTGCTTTCAGCTTGACACAGTTTGAG 300
360 CACATTTTGAAGAGCTATTTGAATCAATTTGCTTTCAGCTTGACACAGTTTGAG 419
301 TATGCAAAAGCTATATTTTGAAGAAAGAAATTAATCTCCGAGACATCTAAAGAT 360
420 TATGCAAAAGCTATATTTTGAAGAAAGAAATTAATCTCCGAGACATCTAAAGAT 479
361 GAATTTCTATCATCCAAAGTATGAGTACAGAAACGCTGCAAAAAGCTTCTACAGAT 420
480 GAATTTCTATCATCCAAAGTATGAGTACAGAAACGCTGCAAAAAGCTTCTACAGAT 539
421 GAACCCGAAATTCCTTCTGAGAGAAACAGCTCAGTGTCCAACTCTTAACCTTGA 480
540 GAACCCGAAATTCCTTCTGAGAGAAACAGCTCAGTGTCCAACTCTTAACCTTGA 599
481 ACTGTGAGAACTGTGAGAGAAAGAGGAGTACAACTCAAAAAGCTGTCTACAT 540
600 ACTGTGAGAACTGTGAGAGAAAGAGGAGTACAACTCAAAAAGCTGTCTACAT 659
541 GAATTTGAGATCTGATTTCTTGAAGATACCTTAATTAAGCAACTTATGAGTGGGA 600
660 GAATTTGAGATCTGATTTCTTGAAGATACCTTAATTAAGCAACTTATGAGTGGGA 719
601 GATCAGAAATTTGTAACAATCACCCCTCAGAGAAACAGAGATGAATATGATTTGAT 660
720 GATCAGAAATTTGTAACAATCACCCCTCAGAGAAACAGAGATGAATATGATTTGAT 779
661 GCAAAAAGGCTGTGATTTTCTGAGAGGATGTAACAATTAAGCAACTATGATTA 720
780 GCAAAAAGGCTGTGATTTTCTGAGAGGATGTAACAATTAAGCAACTATGATTA 839
721 CCCAGTATATATGATTTTGAACACCACTGAGAGGCTGAGAGGCTTACAGAAAG 780
840 CCCAGTATATATGATTTTGAACACCACTGAGAGGCTGAGAGGCTTACAGAAAG 899
781 TATCAGGATGATTTGTTTCAACTTGATGATGAGCCTATGAGCAATATCTATGCC 840
900 TATCAGGATGATTTGTTTCAACTTGATGATGAGCCTATGAGCAATATCTATGCC 959
841 AGCTCATTACAGATGAGAGAGAGTTTATCTACATAAGACAGATGATGATGAA 900

960 AGCTCATTACAGATGAGAGAGAGTTTATCTACATAAGACAGATGATGATGAA 1019
901 AAGCTGATTTCTGATTAATAAGCAACAGGCTGGCTAGCAGAGGCAACATACAGA 960
1020 AAGCTGATTTCTGATTAATAAGCAACAGGCTGGCTAGCAGAGGCAACATACAGA 1079
961 TGGGCTGAGATGAGAAACATGTAATGATAGGGGAGCTCCAGACAGAGAAAAAGTA 1020
1080 TGGGCTGAGATGAGAAACATGTAATGATAGGGGAGCTCCAGACAGAGAAAAAGTA 1139
1021 GATCTGATTTGCTGATTTCTGAGAGGAAAGAAATGATTAAGCAAGAAATCTCCAT 1080
1140 GATCTGATTTGCTGATTTCTGAGAGGAAAGAAATGATTAAGCAAGAAATCTCCAT 1199
1081 TCAGAGATTTCTGAGATTTCTGAGAGGAAAGAAATGATTAAGCAAGAAATCTCCAT 1140
1200 TCAGAGATTTCTGAGATTTCTGAGAGGAAAGAAATGATTAAGCAAGAAATCTCCAT 1259
1141 AAAGTTATGAGTGTCTTTCAGAGAGTATGATGATGATGATGATGATGATGAT 1200
1260 AAAGTTATGAGTGTCTTTCAGAGAGTATGATGATGATGATGATGATGATGAT 1319
1201 GGGGAGTCTGATTAATAAGCAACAGGCTGATGATGATGATGATGATGATGAT 1260
1320 GGGGAGTCTGATTAATAAGCAACAGGCTGATGATGATGATGATGATGATGAT 1379
1261 GAATTTCTGATTTCTGAGAGAAATGATGATGATGATGATGATGATGATGAT 1320
1380 GAATTTCTGATTTCTGAGAGAAATGATGATGATGATGATGATGATGATGAT 1439
1321 ATATGTAAGTGAAGAGTCTACTCCAAATCAGTATGATGATGATGATGATGAT 1380
1440 ATATGTAAGTGAAGAGTCTACTCCAAATCAGTATGATGATGATGATGATGAT 1499
1381 TTTGGAAACCTATCGAGAGAGGAGGCTCCCAACTATGATGATGATGATGAT 1440
1500 TTTGGAAACCTATCGAGAGAGGAGGCTCCCAACTATGATGATGATGATGATGAT 1559
1441 CTAAATTAAGAGATTTGTTACTGAGCAGACAGATTAATACAGAGGCTCCCTCA 1500
1560 CTAAATTAAGAGATTTGTTACTGAGCAGACAGATTAATACAGAGGCTCCCTCA 1619
1501 AAATTAAGGCTTAAGAGAGCTTATCATCAGGCTTCTATCTGAGGATTTTATCA 1560
1620 AAATTAAGGCTTAAGAGAGCTTATCATCAGGCTTCTATCTGAGGATTTTATCA 1679
1561 GCAGATTTGGAGTTCAGAAAGCTGCTGAATGATTAATCAGGAGTATCAACCAAG 1620
1680 GCAGATTTGGAGTTCAGAAAGCTGCTGAATGATTAATCAGGAGTATCAACCAAG 1739
1621 CAGATGCTCAAGTATGATTAATTAATAGTGTCTATGAGTATTAAGCAAGAGT 1680
1740 CAGATGCTCAAGTATGATTAATTAATAGTGTCTATGAGTATTAAGCAAGAGT 1799
1681 TCTATTCAGATGAGAAATTCCTTAACCAATTAAGTATGATGATGATGATGAT 1740
1800 TCTATTCAGATGAGAAATTCCTTAACCAATTAAGTATGATGATGATGATGAT 1859
1741 AAAAGCAAGCTGAGAACTATTAAGCAGGATTAAGCAATTAAGTATGATGAT 1800
1860 AAAAGCAAGCTGAGAACTATTAAGCAGGATTAAGCAATTAAGTATGATGAT 1919
1801 CACATTTCAAAAGCACTTAAGAAATAGGCTGAGAGGAAAGTCTTACAGGCAAT 1860
1920 CACATTTCAAAAGCACTTAAGAAATAGGCTGAGAGGAAAGTCTTACAGGCAAT 1979
1861 CATGCGCTTGAAGTATGATGATGATGATGATGATGATGATGATGATGATGAT 1920
1980 CATGCGCTTGAAGTATGATGATGATGATGATGATGATGATGATGATGATGAT 2039
1921 ATTGATGATTTCTAGAGTGAAGAGATTAAGCAAGAAAGTATGATGATGAT 1980
2040 ATTGATGATTTCTAGAGTGAAGAGATTAAGCAAGAAAGTATGATGATGAT 2099

1981 AGGCACAGCAGAAAACCTACACTCATGGAAGTAAAGAACCTGCAGCTGAGCCAGAG 2040
|||||
2100 AGGCACAGCAGAAAACCTACACTCATGGAAGTAAAGAACCTGCAGCTGAGCCAGAG 2159
|||||
2041 AGTAACAGCCAAATGAACAGACAGTAAGAACATGACAGTATCTTCCAGAGCTG 2100
|||||
2160 AGTAACAGCCAAATGAACAGACAGTAAGAACATGACAGTATCTTCCAGAGCTG 2219
|||||
2101 AAGTAAACAATGACCCGCTTCTTCTTAAGTCTCAATPACAGAGAACTTAAAGAA 2160
|||||
2220 AAGTAAACAATGACCCGCTTCTTCTTAAGTCTCAATPACAGAGAACTTAAAGAA 2279
|||||
2161 TTGTCAATCCTAGCCTTCCAGAGAAAGAAAGAGAACTAGAACAGTTAAAGTG 2220
|||||
2280 TTGTCAATCCTAGCCTTCCAGAGAAAGAAAGAGAACTAGAACAGTTAAAGTG 2339
|||||
2221 TCTAATAATGCTGAAGACCCCAAGATCTCATGTTAACTGAGAAAGGGTTTGCACACT 2280
|||||
2340 TCTAATAATGCTGAAGACCCCAAGATCTCATGTTAACTGAGAAAGGGTTTGCACACT 2399
|||||
2281 GAAAGATCTGAGAGAGTATGATTTGATGCTGCTGATGATGATGATGATGATGATGAT 2340
|||||
2400 GAAAGATCTGAGAGAGTATGATTTGATGCTGCTGATGATGATGATGATGATGATGAT 2459
|||||
2341 GAAAGATCTGCTTACTGGAAGTATGACCTAGGGAAGGCAAAAACAGAACCAATATA 2400
|||||
2460 GAAAGATCTGCTTACTGGAAGTATGACCTAGGGAAGGCAAAAACAGAACCAATATA 2519
|||||
2401 TGCTGAGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2460
|||||
2520 TGCTGAGTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2579
|||||
2461 GATATATGAAATGACAGAGGCTTATGATTCATGAGTATGAGTATGAGTATGAGTATGAGTAT 2520
|||||
2580 GATATATGAAATGACAGAGGCTTATGATTCATGAGTATGAGTATGAGTATGAGTATGAGTAT 2639
|||||
2521 CGGGAACAGCATAGAAATGGAAGAAAGTGAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2580
|||||
2640 CGGGAACAGCATAGAAATGGAAGAAAGTGAATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2699
|||||
2581 TTCAAGGTTTCAAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2640
|||||
2700 TTCAAGGTTTCAAGGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2759
|||||
2641 GAAATGCAACATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2700
|||||
2760 GAAATGCAACATCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2819
|||||
2701 TTGATATGTAACAAAGGAAGAAATCAAGAAAGATGATGATGATGATGATGATGATGATGATGAT 2760
|||||
2820 TTGATATGTAACAAAGGAAGAAATCAAGAAAGATGATGATGATGATGATGATGATGATGATGAT 2879
|||||
2761 CAGACAGTATATACATGACAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2820
|||||
2880 CAGACAGTATATACATGACAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2939
|||||
2821 AATGCCAAATGATGATCAAGAGAGGCTCTAGGTTTGTATGATGATGATGATGATGATGATGATGATGAT 2880
|||||
2940 AATGCCAAATGATGATCAAGAGAGGCTCTAGGTTTGTATGATGATGATGATGATGATGATGATGATGAT 2999
|||||
2881 AAGCAAACTGACATCTTACTTCAAAATCAACATGAGCTTTTACAAAACCCATATCGTATA 2940
|||||
3000 AAGCAAACTGACATCTTACTTCAAAATCAACATGAGCTTTTACAAAACCCATATCGTATA 3059
|||||
2941 CCACACACTTTTCCATCAAGTCAATTTGTATAAATAATTAAGAAAAATCTCTGAGAG 3000
|||||
3060 CCACACACTTTTCCATCAAGTCAATTTGTATAAATAATTAAGAAAAATCTCTGAGAG 3119
|||||
3001 GAAACACTTGAAGAACTTCAATGTCACCTGAAGAGAAATGGAAGAAATGAGAACATTTCCA 3060
|||||
3120 GAAACACTTGAAGAACTTCAATGTCACCTGAAGAGAAATGGAAGAAATGAGAACATTTCCA 3179
|||||

3061 AGTACAGTACACATTAAGCCGTATTAACATTTAGAGAAATGTTTTTAAAGAACCCAGC 3120
|||||
3180 AGTACAGTACACATTAAGCCGTATTAACATTTAGAGAAATGTTTTTAAAGAACCCAGC 3239
|||||
3121 TCAGCAATTAATTAAGAGTACGTTCCAGTACTTAATGAAGTGGCTCCAGTATTAATGA 3180
|||||
3240 TCAGCAATTAATTAAGAGTACGTTCCAGTACTTAATGAAGTGGCTCCAGTATTAATGA 3299
|||||
3181 ATAGTTCAGTATGAAAGAAATCAACATCAACAGACAGTATGAAAGAGGGCCAAATTTG 3240
|||||
3300 ATAGTTCAGTATGAAAGAAATCAACATCAACAGACAGTATGAAAGAGGGCCAAATTTG 3359
|||||
3241 AATGCTATGCTTAGATTAAGGGGTTTGCACCTGAGTCTATTAACAAAGTCTTCTGGA 3300
|||||
3360 AATGCTATGCTTAGATTAAGGGGTTTGCACCTGAGTCTATTAACAAAGTCTTCTGGA 3419
|||||
3301 AGTAAATTAAGCATCTGAAATTAAGAAAGCAAGATATGAAGAAATGTTGACAGTCTTT 3360
|||||
3420 AGTAAATTAAGCATCTGAAATTAAGAAAGCAAGATATGAAGAAATGTTGACAGTCTTT 3479
|||||
3361 AATACAGATTTCTCCATATCTGATTTGATGATTAAGAAAGACCTATGAGGAGTATGAT 3420
|||||
3480 AATACAGATTTCTCCATATCTGATTTGATGATTAAGAAAGACCTATGAGGAGTATGAT 3539
|||||
3421 CATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGATGATGATGATGATGATGATGATGAT 3480
|||||
3540 CATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGATGATGATGATGATGATGATGATGAT 3599
|||||
3481 GAAGATCTAGTTTGTCTGAAAGATGACATTAAGAAAGTCTGCTGTTTAAAGCAAAAGC 3540
|||||
3600 GAAGATCTAGTTTGTCTGAAAGATGACATTAAGAAAGTCTGCTGTTTAAAGCAAAAGC 3659
|||||
3541 GTCCAGAAAGGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3600
|||||
3660 GTCCAGAAAGGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3719
|||||
3601 GGTACCGAAGAGGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3660
|||||
3720 GGTACCGAAGAGGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3779
|||||
3661 GAAGAGCTTCCCTGCTTCAACACTTGTATTTTGTAAAGTAAACATATACCTTCTGAG 3720
|||||
3780 GAAGAGCTTCCCTGCTTCAACACTTGTATTTTGTAAAGTAAACATATACCTTCTGAG 3839
|||||
3721 TCTACTAGGCAATGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3780
|||||
3840 TCTACTAGGCAATGAGGCTTACAGAGAGTCTGAGGCTTACACCATACATTTGGCTGAG 3899
|||||
3781 TTATCATTTGAAGATAGCTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3840
|||||
3900 TTATCATTTGAAGATAGCTTAATGATGATGATGATGATGATGATGATGATGATGATGATGAT 3959
|||||
3841 CAGGACATCACTTATGAGAGAAACAAATGTTCTGCTAGCTTGTCTTCTTCAAGCTGC 3900
|||||
3960 CAGGACATCACTTATGAGAGAAACAAATGTTCTGCTAGCTTGTCTTCTTCAAGCTGC 4019
|||||
3901 AGTGAATTTGAAGAGCTTACGCAAAATCAAAACCCAGAGATCTTCTTGAATGCTTCT 3960
|||||
4020 AGTGAATTTGAAGAGCTTACGCAAAATCAAAACCCAGAGATCTTCTTGAATGCTTCT 4079
|||||
3961 TCACAAACAATGAGGATCAGCTGAAAGCCAGGAGTTGCTGAGAGTACAGAGAAATTTG 4020
|||||
4080 TCACAAACAATGAGGATCAGCTGAAAGCCAGGAGTTGCTGAGAGTACAGAGAAATTTG 4139
|||||
4021 GTTTCAGATGATGAAAGAAAGAGAGGCTTGAAGAAATTAATCAAGAGAGCAAGC 4080
|||||
4140 GTTTCAGATGATGAAAGAAAGAGAGGCTTGAAGAAATTAATCAAGAGAGCAAGC 4199
|||||
4081 ATGATTTCAAACTTAAGTGAAGCAGCATCTGGGTGAGAGTGAAGAAAGGCTCTGGA 4140
|||||
4200 ATGATTTCAAACTTAAGTGAAGCAGCATCTGGGTGAGAGTGAAGAAAGGCTCTGGA 4259
|||||
4141 GACTGCTCAGGAGCTATCTCTCAGAGTGAATTTTAAACCACTCAGCAGAGGATACCATG 4200
|||||

Db 4260 GACGCTCAGGCGATCTCTCAGAGTACATTTTACCACACAGGAGGATACCATG 4319
 QY 4201 CAACATACCTGATTAAGCTCCAGCAGGAAATGGTGAATGAAAGCTGTAGAACG 4260
 Db 4320 CAACATACCTGATTAAGCTCCAGCAGGAAATGGTGAATGAAAGCTGTAGAACG 4379
 QY 4261 CATGGAGCAGCCTTCTAGAGCTACCTTCATCAATAGTACTCTCTCCCTGAG 4320
 Db 4380 CATGGAGCAGCCTTCTAGAGCTACCTTCATCAATAGTACTCTCTCCCTGAG 4439
 QY 4321 GACCTGCCAATTCAGAAACGACATCAGAAAAAGAGTATTACTTACAGAAAGT 4380
 Db 4440 GACCTGCCAATTCAGAAACGACATCAGAAAAAGAGTATTACTTACAGAAAGT 4499
 QY 4381 AGTGAATACCTTATTAAGCAGAAATCCAGAAAGCCTTTCTGCTGACAAAGTTGAGGTCT 4440
 Db 4500 AGTGAATACCTTATTAAGCAGAAATCCAGAAAGCCTTTCTGCTGACAAAGTTGAGGTCT 4559
 QY 4441 GCAGATAGTTTACAGTAAATTAAGAACAGAGTGAAGAGTCAATCCCTTCTAA 4500
 Db 4560 GCAGATAGTTTACAGTAAATTAAGAACAGAGTGAAGAGTCAATCCCTTCTAA 4619
 QY 4501 TGCCCATCATAGATGATAGTGGTACATGCCAGATTGCTCTGGAGTCTTGAGATAGA 4560
 Db 4620 TGCCCATCATAGATGATAGTGGTACATGCCAGATTGCTCTGGAGTCTTGAGATAGA 4679
 QY 4561 AACTACCATCTCAAGAGAGCTCTTAAGGTTGTGATGTGAGAGAGCAAGCTGGAA 4620
 Db 4680 AACTACCATCTCAAGAGAGCTCTTAAGGTTGTGATGTGAGAGAGCAAGCTGGAA 4739
 QY 4621 GAGTCTGGGCGACAGATTTGACGGAACATCTTACTTGCCAAAGCAAGATCTAGAGGA 4680
 Db 4740 GAGTCTGGGCGACAGATTTGACGGAACATCTTACTTGCCAAAGCAAGATCTAGAGGA 4799
 QY 4681 ACCCTTACCTGGAATCTGGAATAGCCTCTTCTGTGATGACCCGAACTCTATCTCT 4740
 Db 4800 ACCCTTACCTGGAATCTGGAATAGCCTCTTCTGTGATGACCCGAACTCTATCTCT 4859
 QY 4741 GAAAGAGAGCCCGAGAGTCAAGCTGTGTGGCAACATACATCTTCAACCTCTGATG 4800
 Db 4860 GAAAGAGAGCCCGAGAGTCAAGCTGTGTGGCAACATACATCTTCAACCTCTGATG 4919
 QY 4801 AAAGTCCCAATGAAAGTTGACAGATCTGCCAGAGTCCAGCTGCTCATACTACT 4860
 Db 4920 AAAGTCCCAATGAAAGTTGACAGATCTGCCAGAGTCCAGCTGCTCATACTACT 4979
 QY 4861 GATACCTGCTGATTAATGCAATGGAAGAGTGAAGAGGAGAAACCAAGATTGACA 4920
 Db 4980 GATACCTGCTGATTAATGCAATGGAAGAGTGAAGAGGAGAAACCAAGATTGACA 5039
 QY 4921 GCTTCAACAGAAAGGTCACAAAGAAATGTCATGTGTGTGAGCTGAGCCAGAA 4980
 Db 5040 GCTTCAACAGAAAGGTCACAAAGAAATGTCATGTGTGTGAGCTGAGCCAGAA 5099
 QY 4981 GAATTTATGCTGTGTACAGATTTGCCAGAAACACACATCACTTAACTAATTAAT 5040
 Db 5100 GAATTTATGCTGTGTACAGATTTGCCAGAAACACACATCACTTAACTAATTAAT 5159
 QY 5041 ACTGAAGAGACTACTGATGTTGATGAAGAGTGTGAGTTGTGTGAGAGGACA 5100
 Db 5160 ACTGAAGAGACTACTGATGTTGATGAAGAGTGTGAGTTGTGTGAGAGGACA 5219
 QY 5101 CTGAATATTTTCTAGAAATGCGGAGAGAAATGGTAGTATTCTTGAGTGACC 5160
 Db 5220 CTGAATATTTTCTAGAAATGCGGAGAGAAATGGTAGTATTCTTGAGTGACC 5279
 QY 5161 CAGTCTATTAAAGAAAGAAATCTGTAATGAGATGATTTTGAAGTCAGAGAGATGTG 5220
 Db 5280 CAGTCTATTAAAGAAAGAAATCTGTAATGAGATGATTTTGAAGTCAGAGAGATGTG 5339
 QY 5221 GTCAATGGAAGAAACCAAGCTCAAGAGGAGACAGAAATCCAGAGAGAAAGTTC 5280

Db 5340 GTCAATGGAAGAAACCAAGCTCAAGAGGAGACAGAAATCCAGAGAGAAAGTTC 5399
 QY 5281 TTCAGAGGAGCTTGAATCTGTTGATGAGGCTTTCACCAACATGCCAGATCAACTG 5340
 Db 5400 TTCAGAGGAGCTTGAATCTGTTGATGAGGCTTTCACCAACATGCCAGATCAACTG 5459
 QY 5341 GAATGATGTAACAGCTGTGTGCTCTGTGTGTAAGAGCTTTTCATCAATCACTT 5400
 Db 5460 GAATGATGTAACAGCTGTGTGCTCTGTGTGTAAGAGCTTTTCATCAATCACTT 5519
 QY 5401 GGCACAGGTGTCCACCAATGTGTGTGACAGCAGATGCTGTGACAGAGAGCAATGGC 5460
 Db 5520 GGCACAGGTGTCCACCAATGTGTGTGACAGCAGATGCTGTGACAGAGAGCAATGGC 5579
 QY 5461 TTCATGCAATTTGGGCAATGTGTGAGGACCTGTGTGACCCGAGAGTGGTGTGAC 5520
 Db 5580 TTCATGCAATTTGGGCAATGTGTGAGGACCTGTGTGACCCGAGAGTGGTGTGAC 5639
 QY 5521 AGTGAAGACCTTACAGATGCGCAGAGAGCTGGACACCTGATATACCCAGATCCCCAC 5580
 Db 5640 AGTGAAGACCTTACAGATGCGCAGAGAGCTGGACACCTGATATACCCAGATCCCCAC 5699
 QY 5581 AGCCACTAC 5589
 Db 5700 AGCCACTAC 5708

RESULT 6
 US-09-099-753-1
 ; Sequence 1, Application US/09099753
 ; Patent No. 6149903
 ; GENERAL INFORMATION:
 ; APPLICANT: HOLT, JEFFREY T.
 ; APPLICANT: JENSEN, ROY A.
 ; APPLICANT: PAGE, DAVID L.
 ; APPLICANT: KING, MART-CLAIRE
 ; APPLICANT: SZABO, CSILLA I.
 ; APPLICANT: JETTTON, THOMAS L.
 ; APPLICANT: ROBINSON-BENION, CHERYL L.
 ; APPLICANT: THOMPSON, MARILYN E.
 ; TITLE OF INVENTION: CHARACTERIZED BRCA1 AND BRCA2
 ; TITLE OF INVENTION: PROTEINS AND SCREENING AND THERAPEUTIC METHODS BASED ON
 ; NUMBER OF SEQUENCES: 29
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: ARLES A. TAYLOR, JR.
 ; STREET: SUITE 1401, UNIVERSITY TOWER, 3100 TOWER
 ; STREET: BOULEVARD
 ; CITY: DURHAM
 ; STATE: NORTH CAROLINA
 ; COUNTRY: USA
 ; ZIP: 27707
 ; COMPUTER READABLE FORM:
 ; MEDIUM TYPE: Diskette, 3.50 inch, 800 kb storage
 ; COMPUTER: IBM PC/XT/AT compatible
 ; OPERATING SYSTEM: Windows 3.1
 ; SOFTWARE: WORD PERFECT 6.1 and ASCII
 ; CURRENT APPLICATION DATA:
 ; APPLICATION NUMBER: US/09/099,753
 ; FILING DATE:
 ; CLASSIFICATION:
 ; PRIOR APPLICATION DATA:
 ; APPLICATION NUMBER: 08/603,753
 ; FILING DATE: 20 FEB 1996
 ; APPLICATION NUMBER: U.S. 08/373,799
 ; FILING DATE: 17 JAN 1995
 ; ATTORNEY/AGENT INFORMATION:
 ; NAME: ARLES A. TAYLOR, JR.
 ; REGISTRATION NUMBER: 39,395
 ; REFERENCE/DOCKET NUMBER: 1242/2
 ; TELECOMMUNICATION INFORMATION:
 ; TELEPHONE: (919) 493-8000
 ; TELEFAX: (919) 419-0383

TELEX:
: INFORMATION FOR SEQ ID NO: 1:
: SEQUENCE CHARACTERISTICS:
: LENGTH: 5712
: TYPE: nucleic acid
: STRANDEDNESS: double
: TOPOLOGY: linear
: MOLECULE TYPE: cDNA to mRNA
: HYPOTHEICAL: no
: ANTI-SENSE: no
: ORIGINAL SOURCE:
: ORGANISM: Homo sapiens
: INDIVIDUAL ISOLATE:
: DEVELOPMENTAL STAGE: adult
: TISSUE TYPE: female breast
: CELL TYPE: ductal carcinoma in situ, invasive
: CELL TYPE: breast cancer and normal breast tissue
: CELL LINE: not derived from a cell line
: ORGANELLER: no
: IMMEDIATE SOURCE:
: LIBRARY: cDNA library derived from human
: CLONE: obtained using published sequence
: POSITION IN GENOME:
: CHROMOSOME/SEGMENT: unknown
: MAP POSITION:
: UNITS: unknown
: FEATURE:
: NAME/KEY: BRCA1
: LOCATION: Genbank accession no. U14680
: IDENTIFICATION METHOD: microscopicallydirected
: IDENTIFICATION METHOD: sampling and nuclease protection assay
: OTHER INFORMATION: gene encoding BRCA1 protein
: PUBLICATION INFORMATION:
: AUTHORS: Miki, Y., et al.
: TITLE: A strong candidate gene for the breast and
: TITLE: ovarian cancer susceptibility gene BRCA1.
: JOURNAL: Science
: VOLUME: 266
: PAGES: 66-71
: DATE: 1994
: RELEVANT RESIDUES IN SEQ ID NO: 1:
: US-09-099-753-1

Query Match 99.9%; Score 5585.8; DB 3; Length 5712;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGATTATCTGCTCTTCCGCTTGAAGAGTACAAATGTCATTATGCTATGCAGAAA 60
DB 120 ATGGATTATCTGCTCTTCCGCTTGAAGAGTACAAATGTCATTATGCTATGCAGAAA 179
QY 61 ATCTTGAGTGTCCCATCTGTCTGAGTGTATCAAGAACCTGTCTCCAAAGTGTGAC 120
DB 180 ATCTTGAGTGTCCCATCTGTCTGAGTGTATCAAGAACCTGTCTCCAAAGTGTGAC 239
QY 121 CACATATTTGCAAAATTTTGCATGCTGAACCTCTCAACAGAGAAGAGGCGCTTCAG 180
DB 240 CACATATTTGCAAAATTTTGCATGCTGAACCTCTCAACAGAGAAGAGGCGCTTCAG 239
QY 181 TGTCTTTATGTAGAATGATATACCAAAAGAGCGCTACAGAAAGTACAGATTAGT 240
DB 300 TGTCTTTATGTAGAATGATATACCAAAAGAGCGCTACAGAAAGTACAGATTAGT 359
QY 241 CAACCTGTGAAGAGCATTTGAAATCATTTGTGCTTTTACGCTTGACAGAGTTTGAG 300
DB 360 CAACCTGTGAAGAGCATTTGAAATCATTTGTGCTTTTACGCTTGACAGAGTTTGAG 419
QY 301 TATGCAAAAGAGCATTTTGCAGAAAAGAGAAATTAATCTCCTGAAACATCTAAAGAT 360
DB 420 TATGCAAAAGAGCATTTTGCAGAAAAGAGAAATTAATCTCCTGAAACATCTAAAGAT 479
QY 361 GAAGTTCTATCATCCAAAGTATGGGTACAGAAACCGTCCAAAGACTTCTACAGAGT 420
|||||

DB 480 GAAGTTCTATCATCCAAAGTATGGGTACAGAAACCGTCCAAAGACTTCTACAGAGT 539
QY 421 GAACCCCAAAATCTTCTTCTGAGGAACACAGTCTAGTGTCCAACTCTTAACCTTGA 480
DB 540 GAACCCCAAAATCTTCTTCTGAGGAACACAGTCTAGTGTCCAACTCTTAACCTTGA 539
QY 481 ACTGTGAACTCTGAGAGCAAAAGCAGGATACACCTCAAAAAGAGCTGTCTACATT 540
DB 600 ACTGTGAACTCTGAGAGCAAAAGCAGGATACACCTCAAAAAGAGCTGTCTACATT 659
QY 541 GAATGGGATCTGATTTCTTCTGAGATACCGTTAATTAAGCACTTAATGAGTGGGA 600
DB 660 GAATGGGATCTGATTTCTTCTGAGATACCGTTAATTAAGCACTTAATGAGTGGGA 719
QY 601 GATCAGAAATTTGTAACAATCACCCTCAAGAGAACCGGATGATAATCATGTTGATCT 660
DB 720 GATCAGAAATTTGTAACAATCACCCTCAAGAGAACCGGATGATAATCATGTTGATCT 779
QY 661 GCAAAAAAGGCTGCTGTGAAATTTTCTGAGAGGATGTAAACAAATACTGAAACATCAA 720
DB 780 GCAAAAAAGGCTGCTGTGAAATTTTCTGAGAGGATGTAAACAAATACTGAAACATCAA 839
QY 721 CCAGTAATAATGATTTGAAACACCACTGAGAACCTGACCTGAGAGCATCCAGAAAG 780
DB 840 CCAGTAATAATGATTTGAAACACCACTGAGAACCTGACCTGAGAGCATCCAGAAAG 899
QY 781 TATCAGGATGCTCTGTTTCAAACTGATGTGAGGATGTGCAAAATACATGATGCC 840
DB 900 TATCAGGATGCTCTGTTTCAAACTGATGTGAGGATGTGCAAAATACATGATGCC 959
QY 841 AGCTCATTAACAGATGAGAACAGAGTTTATTAATCTCAATAAGACAAATGAATGTAGAA 900
DB 960 AGCTCATTAACAGATGAGAACAGAGTTTATTAATCTCAATAAGACAAATGAATGTAGAA 1019
QY 901 AAGGCTGAATCTGTAAATAAAGCAACAGCTGCTTACAGAGAGCCCAATACAGA 960
DB 1020 AAGGCTGAATCTGTAAATAAAGCAACAGCTGCTTACAGAGAGCCCAATACAGA 1079
QY 961 TGGGCTGGAAGTAAAGAAATGATTAATGATGAGGAGCTCCACAGAGAAAAGGTA 1020
DB 1080 TGGGCTGGAAGTAAAGAAATGATTAATGATGAGGAGCTCCACAGAGAAAAGGTA 1139
QY 1021 GATCTGAATCTGATCCCTGTGTGAGAGAAAAGAAATGAATAAGCAAAATCCATGTC 1080
DB 1140 GATCTGAATCTGATCCCTGTGTGAGAGAAAAGAAATGAATAAGCAAAATCCATGTC 1139
QY 1081 TCAGAGAACTCTAGAGATGATGAAGATGCTTGTGATTAACATAATAGCAGATTGAG 1140
DB 1200 TCAGAGAACTCTAGAGATGATGAAGATGCTTGTGATTAACATAATAGCAGATTGAG 1259
QY 1141 AAAGTTAATGAGTGTCTTCCAGAGATGATGATGATGATGATGATGATGATGATGAT 1200
DB 1260 AAAGTTAATGAGTGTCTTCCAGAGATGATGATGATGATGATGATGATGATGATGAT 1319
QY 1201 GGGGAGTCTGAATCAATGCAAGAGTGTGATGATGATGATGATGATGATGATGATGAT 1260
DB 1320 GGGGAGTCTGAATCAATGCAAGAGTGTGATGATGATGATGATGATGATGATGATGAT 1379
QY 1261 GAATATTTCTGCTTCCAGAGAAATAGACTTACTGCGCAGATGATGATGATGATGAT 1320
DB 1380 GAATATTTCTGCTTCCAGAGAAATAGACTTACTGCGCAGATGATGATGATGATGATGAT 1439
QY 1321 ATATGTAAGTGAAGAGTGTCTGCAATGATGATGATGATGATGATGATGATGATGAT 1380
DB 1440 ATATGTAAGTGAAGAGTGTCTGCAATGATGATGATGATGATGATGATGATGATGAT 1499
QY 1381 TTTGGGAAAACCTATCGAGAGAGGCAAGGCTCCCAACTTAAAGCCTGTAACCTGAAAT 1440
DB 1500 TTTGGGAAAACCTATCGAGAGAGGCAAGGCTCCCAACTTAAAGCCTGTAACCTGAAAT 1559
QY 1441 CTAAATTAAGAGCATTGTTTACTGAGCAGATTAATTAAGAGCCTCCCTCACAAAT 1500
DB 1560 CTAAATTAAGAGCATTGTTTACTGAGCAGATTAATTAAGAGCCTCCCTCACAAAT 1619

QY	1501	AAATTAAAGCGTAAAGAGACCTACATCAGCCCTTCATCCTGAGAGATTTTATCAAGAA	1560
Db	1620	AAATTAAAGCCGTAAAGAGACCTACATCAGCCCTTCATCCTGAGAGATTTTATCAAGAA	1679
QY	1561	GCAGATTTGGCGTTCAAAGAGCTCCTCAAAATGATAATCAGGGAACTAACCAACGGAG	1620
Db	1680	GCAGATTTGGCGATTCAAAGAGCTCCTCAAAATGATAATCAGGGAACTAACCAACGGAG	1739
QY	1621	CAGAAATGTCGAATGATGATATTTACTAATAGTGGTCATGAGAAATTAACAAAGTGAT	1680
Db	1740	CAGAAATGTCGAATGATGATATTTACTAATAGTGGTCATGAGAAATTAACAAAGTGAT	1799
QY	1681	TCTATTGGAATGAGAAAAATTCCTAACCCATATGAAATCAGTCGAAAAAGAAATTCGCTTC	1740
Db	1800	TCTATTGGAATGAGAAAAATTCCTAACCCATATGAAATCAGTCGAAAAAGAAATTCGCTTC	1859
QY	1741	AAACGGAAGCTGAACCTATAAGCAGCAGTATAGCATATGGAATCTGAAATTAATATC	1800
Db	1860	AAACGGAAGCTGAACCTATAAGCAGCAGTATAGCATATGGAATCTGAAATTAATATC	1919
QY	1801	CACATTTAAAGCAGCTTAAGAAATAGCGTGAAGAGAAAGTCTTCTACCAAGCATATT	1860
Db	1920	CACATTTAAAGCAGCTTAAGAAATAGCGTGAAGAGAAAGTCTTCTACCAAGCATATT	1979
QY	1861	CATGGCTTGAACCTAGTAGTCAGTGAATCTAACCCAGCTAATTTGACTGAATTCGAA	1920
Db	1980	CATGGCTTGAACCTAGTAGTCAGTGAATCTAACCCAGCTAATTTGACTGAATTCGAA	2039
QY	1921	ATTGATAGTTGTTCTTAGCAGTAGTAAGATTAAGAAAAAAGATACACCAATGGCAGTC	1980
Db	2040	ATTGATAGTTGTTCTTAGCAGTAGTAAGATTAAGAAAAAAGATACACCAATGGCAGTC	2099
QY	1981	AGGCACACGAAACCTACAACTCATGGAAGTAAAGAACTGCACTGGAGCCAAAGAG	2040
Db	2100	AGGCACACGAAACCTACAACTCATGGAAGTAAAGAACTGCACTGGAGCCAAAGAG	2159
QY	2041	AGTAAAGCCCAATGAACAGACAGTAAAGACATGACAGTACTTCCACAGAGCTG	2100
Db	2160	AGTAAAGCCCAATGAACAGACAGTAAAGACATGACAGTACTTCCACAGAGCTG	2219
QY	2101	AAGTTAAACAAATGACACGTGTTCTTTACTAAGTTTCAATACCAGTGAACCTTAAGAA	2160
Db	2220	AAGTTAAACAAATGACACGTGTTCTTTACTAAGTTTCAATACCAGTGAACCTTAAGAA	2279
QY	2161	TTTGTCATCCTAGCCCTTCCAAAGAAAGAAAGAAAGAAAGAAAGAAAGTAAAGT	2220
Db	2280	TTTGTCATCCTAGCCCTTCCAAAGAAAGAAAGAAAGAAAGAAAGAAAGTAAAGT	2339
QY	2221	TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAACTGGAAGAAAGGTTTCCAACT	2280
Db	2340	TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAACTGGAAGAAAGGTTTCCAACT	2399
QY	2281	GAAAGATCTGTAAGAGTAGCAGTATTTTCATTTGGTACTGATTAAGCAGCTCAG	2340
Db	2400	GAAAGATCTGTAAGAGTAGCAGTATTTTCATTTGGTACTGATTAAGCAGCTCAG	2459
QY	2341	GAAATATCTGGTTCTGGAAGTTAGCAGCTGATGGGAAGGCAAAACGAACCAATATAA	2400
Db	2460	GAAATATCTGGTTCTGGAAGTTAGCAGCTGATGGGAAGGCAAAACGAACCAATATAA	2519
QY	2401	TGTGGAATCAGTGTGACAGATTTGAAACCACCAAGGAGCTAATTTCAATGTTTCCAAA	2460
Db	2520	TGTGGAATCAGTGTGACAGATTTGAAACCACCAAGGAGCTAATTTCAATGTTTCCAAA	2579
QY	2461	GATAATAGAAATGACACAGAAAGGCTTAATGATTCATTTGGACATGAAGTTAACACAGT	2520
Db	2580	GATAATAGAAATGACACAGAAAGGCTTAATGATTCATTTGGACATGAAGTTAACACAGT	2639
QY	2521	CGGGAACAAACATAGAAATGGAAGAAAGTGAACCTTGATGCTCAGTATTTGCACAAATACA	2580
Db	2640	CGGGAACAAACATAGAAATGGAAGAAAGTGAACCTTGATGCTCAGTATTTGCACAAATACA	2699

Qy	2581	TTTCAAGGTTTCAAACGGCAGCATTTGGTCTGCTTTTCAAAATCCGAGAAATGCGAAGAG	2640
Db	2700	TTTCAAGGTTTCAAACGGCAGCATTTGGTCTGCTTTTCAAAATCCGAGAAATGCGAAGAG	2759
Qy	2641	GAAATGTGCAACATTCCTGCGCCACCTCTGGGTCTTAAAGAAACAAGTCCAAAAGTCACT	2700
Db	2760	GAAATGTGCAACATTCCTGCGCCACCTCTGGGTCTTAAAGAAACAAGTCCAAAAGTCACT	2819
Qy	2701	TTTGAATGTGAACAAAGAGAGAAAATCAAGAAAGAAATGAGTCTAATATCAAGCTCTA	2760
Db	2820	TTTGAATGTGAACAAAGAGAGAAAATCAAGAAAGAAATGAGTCTAATATCAAGCTCTA	2879
Qy	2761	CAGACAGTTAATATCATCTGACGAGCTTTTCCCTGGGTGGTGTGCAAGAAAGATAACCAAGTTGAT	2820
Db	2880	CAGACAGTTAATATCATCTGACGAGCTTTTCCCTGGGTGGTGTGCAAGAAAGATAACCAAGTTGAT	2939
Qy	2821	AATGCCAAATGTATATCAAAAGAGAGCTCTAGTGTTCCTATCATCTCACTCAGAGAGC	2880
Db	2940	AATGCCAAATGTATATCAAAAGAGAGAGCTCTAGTGTTCCTATCATCTCACTCAGAGAGC	2999
Qy	2881	AACGAAACGGAGCTCATCTACTCCAAATPAAACATGTGACCTTTACAAACCCATATCGTATA	2940
Db	3000	AACGAAACGGAGCTCATCTACTCCAAATPAAACATGTGACCTTTACAAACCCATATCGTATA	3059
Qy	2941	CCACACATTTTCCCATCAAGTCATTTGTTAAACTAAATGTAGAAAAAATCTGCTAGAG	3000
Db	3060	CCACACATTTTCCCATCAAGTCATTTGTTAAACTAAATGTAGAAAAAATCTGCTAGAG	3119
Qy	3001	GAAACTTTGAGAGAACATTCATATGTCACCTGGAAGAGAAATGGGAAATGAGAACATTTCCA	3060
Db	3120	GAAACTTTGAGAGAACATTCATATGTCACCTGGAAGAGAAATGGGAAATGAGAACATTTCCA	3179
Qy	3061	AGTACAGTGAGCACAATTAAGCCGTATATTAACATTTAGAGAAAATGTTTTTAAAGAGCCAGC	3120
Db	3180	AGTACAGTGAGCACAATTAAGCCGTATATTAACATTTAGAGAAAATGTTTTTAAAGAGCCAGC	3239
Qy	3121	TCACCAATATTAAATGAAGTAGGTTCCAGTACTAATGAATGGGCTCCAGTATTATAGAA	3180
Db	3240	TCACCAATATTAAATGAAGTAGGTTCCAGTACTAATGAATGGGCTCCAGTATTATAGAA	3299
Qy	3181	ATAGTTCAGATGATGAAGAACATTTCAACAGACAGATAGTAACAAAGAGGCCCAAAATTTG	3240
Db	3300	ATAGTTCAGATGATGAAGAACATTTCAACAGACAGATAGTAACAAAGAGGCCCAAAATTTG	3359
Qy	3241	AATGCTATGCTTAGATTAAGGGGTTTTGCAACCTGAGGTCTATPAAACAAAGTCTTCGGA	3300
Db	3360	AATGCTATGCTTAGATTAAGGGGTTTTGCAACCTGAGGTCTATPAAACAAAGTCTTCGGA	3419
Qy	3301	AGTATTTGTAAGCAATCTGAATATAAAAAGCAAGAAATGTAAGAAAGTGTCCAGACTGT	3360
Db	3420	AGTATTTGTAAGCAATCTGAATATAAAAAGCAAGAAATGTAAGAAAGTGTGTCCAGACTGT	3479
Qy	3361	AATACAGATTTCTCTCCATATCTGATTTCAAGATAACTTAGAACAGAGCCTATGGGAAGTAGT	3420
Db	3480	AATACAGATTTCTCTCCATATCTGATTTCAAGATAACTTAGAACAGAGCCTATGGGAAGTAGT	3539
Qy	3421	CATGATCTCAGAGTTGTGTTTGAGACACCTGATAGACCGTTAGATGATGGTAAGTAAG	3480
Db	3540	CATGATCTCAGAGTTGTGTTTGAGACACCTGATAGACCGTTAGATGATGGTAAGTAAG	3599
Qy	3481	GAAATACTAGTTTGTGTAAGAAATGACATTAAGGAAGTTCTGCTGTTTTTACGAAAAAGC	3540
Db	3600	GAAATACTAGTTTGTGTAAGAAATGACATTAAGGAAGTTCTGCTGTTTTTACGAAAAAGC	3659
Qy	3541	GTCGAGAAAGAGAGCTTAGCAGAGAGTCTTAGCCCTTTACCCATPACATTTGGCTCAG	3600
Db	3660	GTCGAGAAAGAGAGCTTAGCAGAGAGTCTTAGCCCTTTACCCATPACATTTGGCTCAG	3719
Qy	3601	GGTATCCGAAAGAGGGGCCAAAGAAATTAAGTGTCTCAGAGAGAACTTATCTAGTAGAGAT	3660
Db	3720	GGTATCCGAAAGAGGGGCCAAAGAAATTAAGTGTCTCAGAGAGAACTTATCTAGTAGAGAT	3779
Qy	3661	GAAGAGCTTCCCTGCTTCCAACTGTGTTATTTGGTAAAGTAACAAATATACCTTCTCAG	3720

Db	4860	GAAGCAGACAGCCCGAGAGTACAGCTGCTGTGGCAACATACATCTTCAACCTTCGATTTG	4911
QY	4801	AAAGTTCCTCCCAATTGAAAATTGGACGAATCTGCCAGAGTCCAGCTGCTGCTCATACT	4860
Db	4920	AAAGTTCCTCCCAATTGAAAATTGGACGAATCTGCCAGAGTCCAGCTGCTGCTCATACT	4979
QY	4861	GATACCTGCTGGGTTTAAATGCAATGGGAAGAAAGTGTGAGCAGAGGAGAAAGCCAGAAATTGCA	4920
Db	4980	GATACCTGCTGGGTTTAAATGCAATGGGAAGAAAGTGTGAGCAGAGGAGAAAGCCAGAAATTGCA	5039
QY	4921	GCTTCACAGAAAAGGGTCCACAAAAGAAATGTCATGTTGGTGTGCTGGCTGACCCAGAA	4980
Db	5040	GCTTCACAGAAAAGGGTCCACAAAAGAAATGTCATGTTGGTGTGCTGGCTGACCCAGAA	5099
QY	4981	GAATTTATGCTGCTGTACAGATTTGGCCAGAAAACACATCCTTTAACTAAATCTAAT	5040
Db	5100	GAATTTATGCTGCTGTACAGATTTGGCCAGAAAACACATCCTTTAACTAAATCTAAT	5159
QY	5041	ACTGAAGAGCTACTCATGCTGTATGTAAGAAACAGATGCTGATTTGGTGTGAAGGACA	5100
Db	5160	ACTGAAGAGCTACTCATGCTGTATGTAAGAAACAGATGCTGATTTGGTGTGAAGGACA	5219
QY	5101	CTGAATAATTTTCTAGCAATTTGCGGAGAGAAAATGGGATGTTACTTATTTTGGGTGACC	5160
Db	5220	CTGAATAATTTTCTAGCAATTTGCGGAGAGAAAATGGGATGTTACTTATTTTGGGTGACC	5279
QY	5161	CAGTCTATTAAAGAAAGAAAATCCTGTAATGAGCATGATTTTGAAGTCCAGAGAGATGTG	5220
Db	5280	CAGTCTATTAAAGAAAGAAAATCCTGTAATGAGCATGATTTTGAAGTCCAGAGAGATGTG	5339
QY	5221	GTCATATGGAAGAAACCCAGAGGTCACAAAGCGAGCAGAGAAATCCAGAGACAGAAAGATC	5280
Db	5340	GTCATATGGAAGAAACCCAGAGGTCACAAAGCGAGCAGAGAAATCCAGAGACAGAAAGATC	5399
QY	5281	TTCAAGGGGGCTAGAAATCTGTGCTATGAGGCGCTTCACCAACATGCGCCACAGATCAACTG	5340
Db	5400	TTCAAGGGGGCTAGAAATCTGTGCTATGAGGCGCTTCACCAACATGCGCCACAGATCAACTG	5459
QY	5341	GAATGGATGATACAGCTGTGTGATGCTTCTGTGTGTAAGAGAGCTTCATCATTCACCTT	5400
Db	5460	GAATGGATGATACAGCTGTGTGATGCTTCTGTGTGTAAGAGAGCTTCATCATTCACCTT	5519
QY	5401	GGCAGAGGTGTCCACCCCAATTGTGTGTGTGACGACAGATGCTGTGACAGAGACAATGGC	5460
Db	5520	GGCAGAGGTGTCCACCCCAATTGTGTGTGTGACGACAGATGCTGTGACAGAGACAATGGC	5579
QY	5461	TTCCATGCAATTGGGACAGATGTGTGAGGACACTGTGGGGAGCCGAGAGTGGGTGTGGAC	5520
Db	5580	TTCCATGCAATTGGGACAGATGTGTGAGGACACTGTGGGGAGCCGAGAGTGGGTGTGGAC	5639
QY	5521	AGTGTAGCACTCTACAGATGTCAGAGAGTGTGACACCTACCTGATACCCAGATGCCAC	5580
Db	5640	AGTGTAGCACTCTACAGATGTCAGAGAGTGTGACACCTACCTGATACCCAGATGCCAC	5699
QY	5581	AGCCACTAC 5589	
Db	5700	AGCCACTAC 5708	
RESULT 7			
US-08-986-106-1			
; Sequence 1, Application US/08986106			
; Patent No. 6177410			
; GENERAL INFORMATION:			
; APPLICANT: HOLT, JEFFREY T.			
; APPLICANT: JENSEN, ROY A.			
; APPLICANT: KING, MARY-CLAIRE			
; APPLICANT: STEINER, MITCHELL S.			
; APPLICANT: ROBINSON-BENION, CHEERYL L.			
; APPLICANT: THOMPSON, MARILYN E.			
; TITLE OF INVENTION: THERAPEUTIC METHODS FOR			
; PROSTATE CANCER			
; NUMBER OF SEQUENCES: 26			

RESPONSE ADDRESS:
ADDRESS: ARLES A. TAYLOR, JR.
STREET: SUITE 1401, UNIVERSITY TOWER, 3100 TOWER
CITY: DURHAM
STATE: NORTH CAROLINA
COUNTRY: USA
ZIP: 27707
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.44MB storage
COMPUTER: IBM PC/XT/AT compatible
OPERATING SYSTEM: Windows 3.1
SOFTWARE: WORD PERFECT 6.1 and ASCII
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/986,106
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/603,753
FILING DATE: 20 FEB 1996
ATTORNEY/AGENT INFORMATION:
NAME: ARLES A. TAYLOR, JR.
REGISTRATION NUMBER: 39,395
REFERENCE/DOCKET NUMBER: 1242/3
TELECOMMUNICATION INFORMATION:
TELEPHONE: (919) 493-8000
TELEFAX: (919) 419-0383
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5712
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
FEATURE:
NAME/KEY: BRCA1
LOCATION: Genbank accession no. U14680
PUBLICATION INFORMATION:
AUTHORS: Miki, Y., et. al.
TITLE: A strong candidate gene for the breast and
ovarian cancer susceptibility gene BRCA1.
JOURNAL: Science
VOLUME: 266
PAGES: 66-71
DATE: 1994
US-08-986-106-1
Query Match 99.9%; Score 5585.8; DB 4; Length 5712;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

361 GAAGTTTCATCATCCAAAGATATGGGCTACAGAAACCGTGCCAAAAGACTTCTACAGAGT 420
480 GAAGTTTCATCATCCAAAGATATGGGCTACAGAAACCGTGCCAAAAGACTTCTACAGAGT 539
421 GAACCCGAAATCTCTCTTCTGAGAAACCGTCTAGTGTCTCACTCTCACTTGA 480
540 GAACCCGAAATCTCTCTTCTGAGAAACCGTCTAGTGTCTCACTCTCACTTGA 539
481 ACTGAGAACTCTGAGCAAGAGGAGTATACCTCAAGAGAGTGTCTACTAT 540
600 ACTGAGAACTCTGAGCAAGAGGAGTATACCTCAAGAGAGTGTCTACTAT 659
541 GAATGGGATCTGATTTCTTCTGAGAAATCCGTATATAAGCACTTATTCAGTGTGGA 600
660 GAATGGGATCTGATTTCTTCTGAGAAATCCGTATATAAGCACTTATTCAGTGTGGA 719
601 GATCAAGATTTGTACAAATACACCCCTCAGAAACCGAGATGAATCATCTTGGATTC 660
720 GATCAAGATTTGTACAAATACACCCCTCAGAAACCGAGATGAATCATCTTGGATTC 779
661 GCAAAAAGGCTGTGTGAATTTCTGAGACGGATGTACCAATATCTGAACATCATCA 720
780 GCAAAAAGGCTGTGTGTGAATTTCTGAGACGGATGTACCAATATCTGAACATCATCA 839
721 CCCAGTAATTAATGATTTGACACCACTGAGAGCGGTGACCTGAGAGGATCCAGAAAG 780
840 CCCAGTAATTAATGATTTGACACCACTGAGAGCGGTGACCTGAGAGGATCCAGAAAG 899
781 TATCAGGGTATGTTCTTCAAACTGTGATGTGAGAGCATGTGGACAAATATCTAGCC 840
900 TATCAGGGTATGTTCTTCAAACTGTGATGTGAGAGCATGTGGACAAATATCTAGCC 959
841 AGCTATATACAGCATAGAGACAGAGTTTATCTACTAAGACAGAAATGAATGTAGAA 900
960 AGCTATATACAGCATAGAGACAGAGTTTATCTACTAAGACAGAAATGAATGTAGAA 1019
901 AAGGCTGAATCTGTAAATTAAGCAACAGGCTGCTTACAGAGGACCAATACAGAG 960
1020 AAGGCTGAATCTGTAAATTAAGCAACAGGCTGCTTACAGAGGACCAATACAGAG 1079
961 TGGGCTGAGAGTAAGAGAAACATGTAATGATGAGGAGGACCTCCACACAGAAAAAGGTA 1020
1080 TGGGCTGAGAGTAAGAGAAACATGTAATGATGAGGAGGACCTCCACACAGAAAAAGGTA 1139
1021 GATCTGAATGCTGATCCCTGTGTGAGAAAGATGATGAATGAAGCAAACTGCTATGC 1080
1140 GATCTGAATGCTGATCCCTGTGTGAGAAAGATGATGAATGAAGCAAACTGCTATGC 1199
1081 TCAGAGAACTCTAGAGATCTGAAAGATGTTCTTGTGATTAACCTAAATAGACATTCAG 1140
1200 TCAGAGAACTCTAGAGATCTGAAAGATGTTCTTGTGATTAACCTAAATAGACATTCAG 1259
1141 AAGTATATGATGTTTCTCAGAAAGATGATGATGTTAGGTTGATGATGATGAT 1200
1260 AAGTATATGATGTTTCTCAGAAAGATGATGATGTTAGGTTGATGATGATGAT 1319
1201 GGGAGTCTGATCAATATGCCAAAGTATGATGATGATGATGATGATGATGATGAT 1260
1320 GGGAGTCTGATCAATATGCCAAAGTATGATGATGATGATGATGATGATGATGAT 1379
1261 GAATATCTGTTCTTCTCAGAAATATGATGATGATGATGATGATGATGATGATGAT 1320
1380 GAATATCTGTTCTTCTCAGAAATATGATGATGATGATGATGATGATGATGATGAT 1439
1321 AATGTAATATGTAAGAGTCTCACTCAAAATCACTAAGATATATGTAAGAGCAATA 1380
1440 AATGTAATATGTAAGAGTCTCACTCAAAATCACTAAGATATATGTAAGAGCAATA 1499
1381 TTTGGAGAAACCTATCGAGAGAGGCAAGGCTCCCAACTTAAGCCATGTAAGTAAAT 1440
1500 TTTGGAGAAACCTATCGAGAGAGGCAAGGCTCCCAACTTAAGCCATGTAAGTAAAT 1559

1441 CTAATATAGAGACATTTGTTACTAGACACAGATTAATACAGAGCGTCCCTCCACAAT 1500
1560 CTAATATAGAGACATTTGTTACTAGACACAGATTAATACAGAGCGTCCCTCCACAAT 1619
1501 AAATTAAGGCTAAAAGAGACCTACATCAGCGCTTCATCTCTGAGATTTTATCAGAAA 1560
1620 AAATTAAGGCTAAAAGAGACCTACATCAGCGCTTCATCTCTGAGATTTTATCAGAAA 1679
1561 GCAGATTTGGCAGTTCAGAAAAGACCTCGAATTAATCGAGAACCAACCAAGGAG 1620
1680 GCAGATTTGGCAGTTCAGAAAAGACCTCGAATTAATCGAGAACCAACCAAGGAG 1739
1621 CAGATGCTCAGTGAATTAATTAATAGTGGTATGAGATTAATTAACCAAGGAGAT 1680
1740 CAGATGCTCAGTGAATTAATTAATAGTGGTATGAGATTAATTAACCAAGGAGAT 1739
1681 TCATTCAGAAATGAGAAAATCCTAACCCATAGAAATCTCGAAAAAGAAATCTGCTTC 1740
1800 TCATTCAGAAATGAGAAAATCCTAACCCATAGAAATCTCGAAAAAGAAATCTGCTTC 1859
1741 AAAGCAAGCTGAGAACCTATAGAGAGATTAAGCAATAGCAATAGCAATTAATATC 1800
1860 AAAGCAAGCTGAGAACCTATAGAGAGATTAAGCAATAGCAATAGCAATTAATATC 1919
1801 CACATTCAGAAAGCCTAAAGAAATAGGCTGAGAGAGAGATCTTCTACAGGCAATAT 1860
1920 CACATTCAGAAAGCCTAAAGAAATAGGCTGAGAGAGAGATCTTCTACAGGCAATAT 1979
1861 CATGCGCTTGAAGTATGATGATGATTAATTAAGCCACCTAATTTGATGATGATGAT 1920
1980 CATGCGCTTGAAGTATGATGATGATTAATTAAGCCACCTAATTTGATGATGATGAT 2039
1921 ATGATGATTTGTTAGAGATGAGAGATTAAGAAAGAAAGAAAGTAAACCAACCAATGCTC 1980
2040 ATGATGATTTGTTAGAGATGAGAGATTAAGAAAGAAAGTAAACCAACCAATGCTC 2039
1981 AGGACAGCAGAAAGCCTACAACTCATGAGAGTAAAGAAAGTAAAGCCTGACAGCAGAG 2040
2100 AGGACAGCAGAAAGCCTACAACTCATGAGAGTAAAGAAAGTAAAGCCTGACAGCAGAG 2159
2041 AGTAAACAGCAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2100
2160 AGTAAACAGCAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2219
2101 AAGTAAACAGCAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2160
2220 AAGTAAACAGCAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2279
2161 TTTGTCATCTTACCTCCAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2220
2280 TTTGTCATCTTACCTCCAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2339
2221 TCTAATTAATGCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2280
2340 TCTAATTAATGCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2399
2281 GAAAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2340
2400 GAAAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2459
2341 GAAAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2400
2460 GAAAGATCTGTAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2519
2401 TGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAG 2460
2520 TGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAGTGTAG 2579
2461 GATATATGAAATGACAGAGAGGCTTTAAGTATCATTTGGAGATGAGATTAACACAGT 2520
2580 GATATATGAAATGACAGAGAGGCTTTAAGTATCATTTGGAGATGAGATTAACACAGT 2639
2521 CGGGAACCAAGCATAGAAATGAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2580

2640 CGGGAACCAAGCATAGAAATGAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2699
2581 TTCAAGGTTTCAAGCGCCATCATTTTCTGTTTCAATTCAGAGAAATGAGAGAGAGAGAG 2640
2700 TTCAAGGTTTCAAGCGCCATCATTTTCTGTTTCAATTCAGAGAAATGAGAGAGAGAGAG 2759
2641 GAATGTGCACATTTCTGCGCCACTCTGGGCTCTTAAAGAAACCAAGTCCAAAGTCACT 2700
2760 GAATGTGCACATTTCTGCGCCACTCTGGGCTCTTAAAGAAACCAAGTCCAAAGTCACT 2819
2701 TTTGATGTGAAACAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2760
2820 TTTGATGTGAAACAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 2879
2761 CAGACAGTTAATATCAGTGCAGGCTTCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2820
2880 CAGACAGTTAATATCAGTGCAGGCTTCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2939
2821 AATGCAATATGATATCAAGAGAGGCTCTAGGTTTGTATCATCTCAGTTCAGAGAGC 2880
2940 AATGCAATATGATATCAAGAGAGGCTCTAGGTTTGTATCATCTCAGTTCAGAGAGC 2999
2881 AAGCAAGCTGACATTAATTCAGAAATTAACATGACCTTTACAAACCCATATCTGATAT 2940
3000 AAGCAAGCTGACATTAATTCAGAAATTAACATGACCTTTACAAACCCATATCTGATAT 3059
2941 CCACACCTTTTCCCATCAATCATTTTGTAAATTAATTAATTAATTAATTAATTAATTAAT 3000
3060 CCACACCTTTTCCCATCAATCATTTTGTAAATTAATTAATTAATTAATTAATTAATTAAT 3119
3001 GAAACCTTTGAGAAACATTCATATGTCACCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3060
3120 GAAACCTTTGAGAAACATTCATATGTCACCTGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3179
3061 AGTACAGTGCACATTAATAGCCGTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 3120
3180 AGTACAGTGCACATTAATAGCCGTAATTAATTAATTAATTAATTAATTAATTAATTAATTA 3239
3121 TCAAGCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3180
3240 TCAAGCAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3299
3181 ATAGGTTCCAGTGTAGAAACATTCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3240
3300 ATAGGTTCCAGTGTAGAAACATTCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3359
3241 AATGCTATGCTTAAGTAAAGGCTTTGCAACCTGAGGCTTAATTAACCAAGTCTTCTGCA 3300
3360 AATGCTATGCTTAAGTAAAGGCTTTGCAACCTGAGGCTTAATTAACCAAGTCTTCTGCA 3419
3301 AGTAAATGCTAGCAATTCAGAAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3360
3420 AGTAAATGCTAGCAATTCAGAAATTAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3479
3361 AATACAGATTTCTCTCATATCTATATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3420
3480 AATACAGATTTCTCTCATATCTATATTAATTAATTAATTAATTAATTAATTAATTAATTAAT 3539
3421 CATGATCTCAGGTTTGTCTGAGACACCTGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3480
3540 CATGATCTCAGGTTTGTCTGAGACACCTGATGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3599
3481 GAAGTATCTAGTTTGTGGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3540
3600 GAAGTATCTAGTTTGTGGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3659
3541 GTCCAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3600
3660 GTCCAGAAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3719
3601 GGTACCGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 3660

Db 3720 GGTACCGAGAGGGGCCAAGAAATTAGAGTCTCCAGAGAGAGAACTTATCTAGTGAGAT 3779
Qy 3661 GAAGAGCTTCCCTGCTCCAACTCTGTATTTGGTAAAGTAAACAAATATACCTTCTGAC 3720
Db 3780 GAAGAGCTTCCCTGCTCCAACTCTGTATTTGGTAAAGTAAACAAATATACCTTCTGAC 3839
Qy 3721 TCTACTAGGCATAGACCGTGTCTACCGAGTGTCTGTCTAGACACAGAGAGAAATTTA 3780
Db 3840 TCTACTAGGCATAGACCGTGTCTACCGAGTGTCTGTCTAGACACAGAGAGAAATTTA 3899
Qy 3781 TTATCATTTGAAGAAATAGCTTAAATAGCTGACATCCAGGTAAATTTGGCAAGGATCT 3840
Db 3900 TTATCATTTGAAGAAATAGCTTAAATAGCTGACATCCAGGTAAATTTGGCAAGGATCT 3959
Qy 3841 CAGGAACATCACTTATAGTGAAGAAACAAATGTCTGTAGCTTGTCTTCTTCTACAGTGC 3900
Db 3960 CAGGAACATCACTTATAGTGAAGAAACAAATGTCTGTAGCTTGTCTTCTTCTACAGTGC 4019
Qy 3901 AGTGAATTTGAAGAAATAGCTTACCTGCAATTAACAAACCCAGAGATCTTCTTGTGTTCT 3960
Db 4020 AGTGAATTTGAAGAAATAGCTTACCTGCAATTAACAAACCCAGAGATCTTCTTGTGTTCT 4079
Qy 3961 TCCAAACAAATAGAGCATCAGCTGTAAGCCAGGAGTTGCTGAGTGACAAAGAAATG 4020
Db 4080 TCCAAACAAATAGAGCATCAGCTGTAAGCCAGGAGTTGCTGAGTGACAAAGAAATG 4139
Qy 4021 GTTTCAGATGATGAAGAAAGAGAAAGGCGCTTGAAGAAATTAATCAAGAGAGAAAGC 4080
Db 4140 GTTTCAGATGATGAAGAAAGAGAAAGGCGCTTGAAGAAATTAATCAAGAGAGAAAGC 4199
Qy 4081 ATGATTTCAAACTTAATAGTGAAGAGCATCTGGGTGTGAGAGTGAAGAAAGCGCTCTGTGA 4140
Db 4200 ATGATTTCAAACTTAATAGTGAAGAGCATCTGGGTGTGAGAGTGAAGAAAGCGCTCTGTGA 4259
Qy 4141 GACTGCTCAGGGCTATCTCTCAGAGTGACATTTTAAACCACTCAGCAGAGGATACCATG 4200
Db 4260 GACTGCTCAGGGCTATCTCTCAGAGTGACATTTTAAACCACTCAGCAGAGGATACCATG 4319
Qy 4201 CAACATTAACCTGATTAAGCTCCAGCAGGAAATGCGTGAATAGAAGCTGTGTTAGAACAG 4260
Db 4320 CAACATTAACCTGATTAAGCTCCAGCAGGAAATGCGTGAATAGAAGCTGTGTTAGAACAG 4379
Qy 4261 CATGGAGCCGACCTCTTCAAGCATCCCTCCATCAATAGATCTCTTCCCTTGAG 4320
Db 4380 CATGGAGCCGACCTCTTCAAGCATCCCTCCATCAATAGATCTCTTCCCTTGAG 4439
Qy 4321 GACCTGGGAAATCCAGAAACAAGACATCAGAAAAAGCAGTATTAATCTCAGAAAAAGT 4380
Db 4440 GACCTGGGAAATCCAGAAACAAGACATCAGAAAAAGCAGTATTAATCTCAGAAAAAGT 4499
Qy 4381 AGTGAATTAACCTATTAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAAAGTTGAGTGTCT 4440
Db 4500 AGTGAATTAACCTATTAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAAAGTTGAGTGTCT 4559
Qy 4441 GCAGATAGTCTTACCAGTAAATAAAGAACAGGAGTGAAGAGTCAATCCCTCTTAAA 4500
Db 4560 GCAGATAGTCTTACCAGTAAATAAAGAACAGGAGTGAAGAGTCAATCCCTCTTAAA 4619
Qy 4501 TGCCATCATTTAGATAGTGTGTACATGCACAGTTGCTCTGGAGGCTTCCAGAAATGA 4560
Db 4620 TGCCATCATTTAGATAGTGTGTACATGCACAGTTGCTCTGGAGGCTTCCAGAAATGA 4679
Qy 4561 AACTACCATCTCAAGAGAGAGCTATTAAAGTTGTGTATGTGAGAGCAACAGCTGGA 4620
Db 4680 AACTACCATCTCAAGAGAGAGCTATTAAAGTTGTGTATGTGAGAGCAACAGCTGGA 4739
Qy 4621 GAGCTGTGGCCACACGATTTGACGGAACATCTTACTTGCACAGGCAAGATCTAGAGGA 4680
Db 4740 GAGCTGTGGCCACACGATTTGACGGAACATCTTACTTGCACAGGCAAGATCTAGAGGA 4799
Qy 4681 ACCCTTACCTGGAATCTGGAATCAGCCTCTTCTGTGAGACCTGGAATCTGATCTCTCT 4740
Db 4800 ACCCTTACCTGGAATCTGGAATCAGCCTCTTCTGTGAGACCTGGAATCTGATCTCTCTCT 4859

Qy 4741 GAAGACAGAGCCCGAGAGTCAAGCTGTGTGGCAACATACCATCTTCAACCTCTGATTC 4800
Db 4860 GAAGACAGAGCCCGAGAGTCAAGCTGTGTGGCAACATACCATCTTCAACCTCTGATTC 4919
Qy 4801 AAAGTTCCCAATTTGAAGTTGACAGATCTCCAGAGTCCAGCTGCTCTCATTAATCT 4860
Db 4920 AAAGTTCCCAATTTGAAGTTGACAGATCTCCAGAGTCCAGCTGCTCTCATTAATCT 4979
Qy 4861 GATAGCTGGGTATTAAGCAATGGAAGAGTGTGAGCAGAGGAGGAAGCCAGAAATGACA 4920
Db 4980 GATAGCTGGGTATTAAGCAATGGAAGAGTGTGAGCAGAGGAGGAAGCCAGAAATGACA 5039
Qy 4921 GCTTCAACAGAAAGGCTCAACAAAAGAAATGTCATGTGTGTGTGCTGACCCAGAA 4980
Db 5040 GCTTCAACAGAAAGGCTCAACAAAAGAAATGTCATGTGTGTGTGCTGACCCAGAA 5099
Qy 4981 GAATTTATGCTGTGTACAAAGTTTGCAGAAAACCAATCATCTTAATTAATTAAT 5040
Db 5100 GAATTTATGCTGTGTGTACAAAGTTTGCAGAAAACCAATCATCTTAATTAATTAAT 5159
Qy 5041 ACTGAAGAGCTACTCATGTTGTTATGAAGACAGATGCTGAGTTGTGTGAAGGAGACA 5100
Db 5160 ACTGAAGAGCTACTCATGTTGTTATGAAGACAGATGCTGAGTTGTGTGAAGGAGACA 5219
Qy 5101 CTGAATATTTTCTAGAAATTCGAGGAGAAATGGGTAGTTACCTATTTCTGGGTGACC 5160
Db 5220 CTGAATATTTTCTAGAAATTCGAGGAGAAATGGGTAGTTACCTATTTCTGGGTGACC 5279
Qy 5161 CAGCTATTTAAAGAAAGAAATGCTGAATAGCATATTTTGAAGTCAAGAGAGATGTG 5220
Db 5280 CAGCTATTTAAAGAAAGAAATGCTGAATAGCATATTTTGAAGTCAAGAGAGATGTG 5339
Qy 5221 GTCAATGGAAGAAACCAAGAGTCCAAAGGAGCAGAGAAATCCAGAGAGAAAGATC 5280
Db 5340 GTCAATGGAAGAAACCAAGAGTCCAAAGGAGCAGAGAAATCCAGAGAGAAAGATC 5399
Qy 5281 TTCAGGGGCTAGAAATCTGTTGCTATGAGGCCCTTCAACCAATGCCACAGATCAACTG 5340
Db 5400 TTCAGGGGCTAGAAATCTGTTGCTATGAGGCCCTTCAACCAATGCCACAGATCAACTG 5459
Qy 5341 GAATGAGTGTACAGCTGTGTGCTCTCTGTGTGAAGAGCTTATATTCACCTT 5400
Db 5460 GAATGAGTGTACAGCTGTGTGCTCTCTGTGTGAAGAGCTTATATTCACCTT 5519
Qy 5401 GGCACAGGTGTCCACCAATTTGTTGTGACAGCCAGATGCTTGGAGAGAGCAATGGC 5460
Db 5520 GGCACAGGTGTCCACCAATTTGTTGTGACAGCCAGATGCTTGGAGAGAGCAATGGC 5579
Qy 5461 TTCATGCAATTTGGGACAGATGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGGAC 5520
Db 5580 TTCATGCAATTTGGGACAGATGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGGAC 5639
Qy 5521 AGTGTAGCATCTTACAGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGGAC 5580
Db 5640 AGTGTAGCATCTTACAGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGGAC 5699
Qy 5581 AGCCACTAC 5589
Db 5700 AGCCACTAC 5708

RESULT 8
US-09-007-678B-47
: Sequence 47, Application US/09007678B
: Patent No. 6342483
: GENERAL INFORMATION:
: APPLICANT: HOLT, JEFFREY T.
: APPLICANT: JENSEN, ROY A.
: APPLICANT: PAGE, DAVID L.
: APPLICANT: OBERMILLER, PATRICE S.
: APPLICANT: ROBINSON-BENTON, CHERYL L.
: APPLICANT: THOMPSON, MARILYN E.

TITLE OF INVENTION: METHOD FOR DETECTION AND TREATMENT OF BREAST CANCER
FILE REFERENCE: Attorney Docket No. 6342483 1242-1-2-2
CURRENT APPLICATION NUMBER: US/09/007,678B
CURRENT FILING DATE: 1998-01-15
PRIOR APPLICATION NUMBER: 08/373,799
PRIOR FILING DATE: 1995-01-17
PRIOR APPLICATION NUMBER: 08/182,961
PRIOR FILING DATE: 1994-01-14
NUMBER OF SEQ ID NOS: 61
SOFTWARE: Microsoft Wordpad
SEQ ID NO 47
LENGTH: 5712
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
NAME/KEY: (120)..(5708)
NAME/KEY: misc_feature
LOCATION: (4532)..(4535)
OTHER INFORMATION: Xaa-any amino acid
US-09-007-678B-47

Query Match 99.9%; Score 5585.8; DB 4; Length 5712;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGATTATCTCTCTCTGCGCTTGAAGAAGTACAAATGTCTTATATGCTATGCAGAA 60
DB 120 ATGGATTATCTCTCTCTGCGCTTGAAGAAGTACAAATGTCTTATATGCTATGCAGAA 179
QY 61 ATCTAGAGTGTCCCATCTCTGAGTTGATCAAGAACCTGTCTCCCAAGAGTGAC 120
DB 180 ATCTAGAGTGTCCCATCTCTGAGTTGATCAAGAACCTGTCTCCCAAGAGTGAC 239
QY 121 CACATATTTGCAATTTTGTGATGCTGAAACTTCTCAACGAGAAAGAGGCTTCACAG 180
DB 240 CACATATTTGCAATTTTGTGATGCTGAAACTTCTCAACGAGAAAGAGGCTTCACAG 299
QY 181 TGTCCTTATAGTAAGTATATACCAAGAGAGGCTTCACAAAGTACGAATTTAGT 240
DB 300 TGTCCTTATAGTAAGTATATACCAAGAGAGGCTTCACAAAGTACGAATTTAGT 359
QY 241 CAACCTGTGAGAGTATTTGAAATCATTTGCTTTGAGCTTGACACAGGTTTGAG 300
DB 360 CAACCTGTGAGAGTATTTGAAATCATTTGCTTTGAGCTTGACACAGGTTTGAG 419
QY 301 TATGCAACAGCTATATTTTGCAGAAAGGAAATTAATCTCTCTGAACTCTAAAGAT 360
DB 420 TATGCAACAGCTATATTTTGCAGAAAGGAAATTAATCTCTCTGAACTCTAAAGAT 479
QY 361 GAGTTTCTATCATCAAGATATGGGCTCAGAAACGCTGCAAAAGAGCTTCTACAGAT 420
DB 480 GAGTTTCTATCATCAAGATATGGGCTCAGAAACGCTGCAAAAGAGCTTCTACAGAT 539
QY 421 GAACCCGAAATCTCTCTGAGAGAAACAGCTCTAGTGTCCAACTCTTAACCTTGA 480
DB 540 GAACCCGAAATCTCTCTGAGAGAAACAGCTCTAGTGTCCAACTCTTAACCTTGA 539
QY 481 ACTGTAGAACTCTGAGAGAAAGAGCGGATACAACTCTCAAAAGAGCTGTCTACAT 540
DB 600 ACTGTAGAACTCTGAGAGAAAGAGCGGATACAACTCTCAAAAGAGCTGTCTACAT 659
QY 541 GATTGGAGTCTCTCTCTGAGAGTACCGTATATTAAGGCACTTATGCAATGGGA 600
DB 660 GATTGGAGTCTCTCTCTGAGAGTACCGTATATTAAGGCACTTATGCAATGGGA 719
QY 601 GATCAAGATTTGTACAAATCAACCTCAAGAAACAGGATGAATTCAGTTGATTC 660
DB 720 GATCAAGATTTGTACAAATCAACCTCAAGAAACAGGATGAATTCAGTTGATTC 779
QY 661 GCAGAAAGGCTGCTGTGATTTTCTGAGAGGATTAACAATACTGAACTCAATCA 720
DB 780 GCAGAAAGGCTGCTGTGATTTTCTGAGAGGATTAACAATACTGAACTCAATCA 839

QY 721 CCCAGTATATATGTTTGAACACACCTGAGAGAGCTGACATGAGAGCATCCAGAAAG 780
DB 840 CCCAGTATATATGTTTGAACACACCTGAGAGAGCTGACATGAGAGCATCCAGAAAG 839
QY 781 TATCAGAGTGTCTGTTTCAAACTTGCATGTGAGAGCATGTGGACAAATTAATCAATGCC 840
DB 900 TATCAGAGTGTCTGTTTCAAACTTGCATGTGAGAGCATGTGGACAAATTAATCAATGCC 959
QY 841 AGCTCATTTACAGATGAGAACACAGCTTTATCTACTACTAAGACAGAAATGATGAA 900
DB 960 AGCTCATTTACAGATGAGAACACAGCTTTATCTACTACTAAGACAGAAATGATGAA 1019
QY 901 AAGCTGAATTTCTGATATTAAGCAACACCTGCTTACCAAGAGAGCCACATACAGA 960
DB 1020 AAGCTGAATTTCTGATATTAAGCAACACCTGCTTACCAAGAGAGCCACATACAGA 1079
QY 961 TGGGCTGGAAGTAAAGAACATGTATATAGAGGAGCTCCAGACAGAAAAAAGGTA 1020
DB 1080 TGGGCTGGAAGTAAAGAACATGTATATAGAGGAGCTCCAGACAGAAAAAAGGTA 1139
QY 1021 GATCTGAATCTGATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAAACTGCCATGC 1080
DB 1140 GATCTGAATCTGATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAAACTGCCATGC 1199
QY 1081 TCAGAGATCTCTAGAGTACTGAAAGATGCTTCTGATTAACACTAATTAACAGCATTCAG 1140
DB 1200 TCAGAGATCTCTAGAGTACTGAAAGATGCTTCTGATTAACACTAATTAACAGCATTCAG 1259
QY 1141 AAGCTTATAGTGTGTTTCCAGAAAGTATGATGATGATGATGATGATGATGATGAT 1200
DB 1260 AAGCTTATAGTGTGTTTCCAGAAAGTATGATGATGATGATGATGATGATGATGAT 1319
QY 1201 GGGGAGCTGATCAAAATGCAAAAGTATGATGATGATGATGATGATGATGATGAT 1260
DB 1320 GGGGAGCTGATCAAAATGCAAAAGTATGATGATGATGATGATGATGATGATGAT 1379
QY 1261 GAATATTTCTGCTCTCAGAGAAATATGATGATGATGATGATGATGATGATGATGAT 1320
DB 1380 GAATATTTCTGCTCTCAGAGAAATATGATGATGATGATGATGATGATGATGATGAT 1439
QY 1321 ATATGTAAGTGAAGAGTTCATCTCCAAATCAGTAGAGATATATTAAGACAAATA 1380
DB 1440 ATATGTAAGTGAAGAGTTCATCTCCAAATCAGTAGAGATATATTAAGACAAATA 1499
QY 1381 TTTGGGAAAACCTATGGAAGAAAGCAAGCTCCCACTTAAGCCATGTAATGAAAT 1440
DB 1500 TTTGGGAAAACCTATGGAAGAAAGCAAGCTCCCACTTAAGCCATGTAATGAAAT 1559
QY 1441 CTAAATTAAGGACATTTGTTACTGAGCCACAGATTAACAAGAGGCTCCCTCACAAAT 1500
DB 1560 CTAAATTAAGGACATTTGTTACTGAGCCACAGATTAACAAGAGGCTCCCTCACAAAT 1619
QY 1501 AAATTAAGGCTTAAAGAGAGACCTATACAGGCTTCATCTAGATTTTATCAAGAA 1560
DB 1620 AAATTAAGGCTTAAAGAGAGACCTATACAGGCTTCATCTAGATTTTATCAAGAA 1679
QY 1561 GCAGATTTGGCAGTTCAAAAAGCTCTGAAATATATTAAGGAACTAACAACGAG 1620
DB 1680 GCAGATTTGGCAGTTCAAAAAGCTCTGAAATATATTAAGGAACTAACAACGAG 1739
QY 1621 CAGAATGCTCAAGTGAATATTAATTAAGGCTCAAGATTAACAACGAGAT 1680
DB 1740 CAGAATGCTCAAGTGAATATTAATTAAGGCTCAAGATTAACAACGAGAT 1799
QY 1681 TCTATTCAGATGAGAAAAATCTTAACCCATAGATCACTCAAAAAAGATCTGCTTC 1740
DB 1800 TCTATTCAGATGAGAAAAATCTTAACCCATAGATCACTCAAAAAAGATCTGCTTC 1859
QY 1741 AAAACGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATATGGAATCGAATTAATATC 1800
DB 1860 AAAACGAAAGCTGAACCTATTAAGCAGAGTATTAAGCAATATGGAATCGAATTAATATC 1919

QY 1801 CACAAATCAAAAGACCTAAAAAGATAGCTGAGGAGAAAGTCTTCTACAGCATAATT 1860
| | | | |
Db 1920 CACAATTCAAAAGACCTAAAAAGATAGCTGAGGAGAAAGTCTTCTACAGCATAATT 1979
| | | | |
QY 1861 CATGCGGTGAACTAGTACAGTGAATTAAGCCCACTAATTTGATGCAATTTGAA 1920
| | | | |
Db 1980 CATGCGGTGAACTAGTACAGTGAATTAAGCCCACTAATTTGATGCAATTTGAA 2039
| | | | |
QY 1921 ATTGATAGTGTCTTACAGTGAAGATTAAGAAAAAAAGTACAAACCAATGCGATC 1980
| | | | |
Db 2040 ATTGATAGTGTCTTACAGTGAAGATTAAGAAAAAAAGTACAAACCAATGCGATC 2099
| | | | |
QY 1981 AGGCACAGCAAAACCTTAACAATCATGAGAGCTTAAGAACTGCACTGAGCCAGAG 2040
| | | | |
Db 2100 AGGCACAGCAAAACCTTAACAATCATGAGAGCTTAAGAACTGCACTGAGCCAGAG 2159
| | | | |
QY 2041 AGTACAGCAAAATGAAAGACAGTAAAGACATGACATGACTTCTCCAGAGCTG 2100
| | | | |
Db 2160 AGTACAGCAAAATGAAAGACAGTAAAGACATGACATGACTTCTCCAGAGCTG 2219
| | | | |
QY 2101 AAGTTAAACAATGACACCTGCTTCTTACTAAGTGTTCAAATACCAGTGAATTAAGAA 2160
| | | | |
Db 2220 AAGTTAAACAATGACACCTGCTTCTTACTAAGTGTTCAAATACCAGTGAATTAAGAA 2279
| | | | |
QY 2161 TTTGTCAATCCTTACCTTCCAGAGAAAGAAAAAGAGAACTAGAAACGTTAAAGTG 2220
| | | | |
Db 2280 TTTGTCAATCCTTACCTTCCAGAGAAAGAAAAAGAGAACTAGAAACGTTAAAGTG 2339
| | | | |
QY 2221 TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTGCAAACT 2280
| | | | |
Db 2340 TCTAATTAATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTGCAAACT 2399
| | | | |
QY 2281 GAAAGATCTGTAGAGATAGACATATTATTTGCTAGCTGTACTGATTATGCACTGAG 2340
| | | | |
Db 2400 GAAAGATCTGTAGAGATAGACATATTATTTGCTAGCTGTACTGATTATGCACTGAG 2459
| | | | |
QY 2341 GAAAGATCTGTAGAGATAGACATATTATTTGCTAGCTGTACTGATTATGCACTGAG 2400
| | | | |
Db 2460 GAAAGATCTGTAGAGATAGACATATTATTTGCTAGCTGTACTGATTATGCACTGAG 2519
| | | | |
QY 2401 TGTGTAGTACAGTGTGACATTTGAAAAACCCCAAGGACATTAATTCATGTTTCCAAA 2460
| | | | |
Db 2520 TGTGTAGTACAGTGTGACATTTGAAAAACCCCAAGGACATTAATTCATGTTTCCAAA 2579
| | | | |
QY 2461 GATTAATGAAGATGACAGAGAGCTTTAAGTATTCATTTGAGACATGAAGTTAACACAGT 2520
| | | | |
Db 2580 GATTAATGAAGATGACAGAGAGCTTTAAGTATTCATTTGAGACATGAAGTTAACACAGT 2639
| | | | |
QY 2521 CGGGAACAAGCATAGAAATGGAAGAAAGTGAATGCTGCTAGTATTTGCAAGATTAACA 2580
| | | | |
Db 2640 CGGGAACAAGCATAGAAATGGAAGAAAGTGAATGCTGCTAGTATTTGCAAGATTAACA 2699
| | | | |
QY 2581 TTTCAAGTTCCAAAGCCGACATTTGCTGCTTTTCAATCCAGCAAAATGCAAGAGAG 2640
| | | | |
Db 2700 TTTCAAGTTCCAAAGCCGACATTTGCTGCTTTTCAATCCAGCAAAATGCAAGAGAG 2759
| | | | |
QY 2641 GAATGTGCAACATTTCTGCCCACCTGTGGGTCTTAAAGAAACAAAGTCCAAAAGTCACT 2700
| | | | |
Db 2760 GAATGTGCAACATTTCTGCCCACCTGTGGGTCTTAAAGAAACAAAGTCCAAAAGTCACT 2819
| | | | |
QY 2701 TTTGAATGTGAACAAAAGGAAGAAATCAAGAAAGAAAGTGAATGCTATATTAACACCTGTA 2760
| | | | |
Db 2820 TTTGAATGTGAACAAAAGGAAGAAATCAAGAAAGAAAGTGAATGCTATATTAACACCTGTA 2879
| | | | |
QY 2761 CAGACAGTAAATATCACTGAGGCTTCTGTGTGTGTGTCAGAAAGATTAAGCCAGTGTAT 2820
| | | | |
Db 2880 CAGACAGTAAATATCACTGAGGCTTCTGTGTGTGTGTCAGAAAGATTAAGCCAGTGTAT 2939
| | | | |
QY 2821 AATGCCAAATGTAGTATCAAGAGAGGCTAGGTTTGTCTATCATCTCAGTTTCAAGAGC 2880
| | | | |
Db 2940 AATGCCAAATGTAGTATCAAGAGAGGCTAGGTTTGTCTATCATCTCAGTTTCAAGAGC 2999
| | | | |
QY 2881 AACGAAACTGGAATCATTAATCAAAATTAACATGAGACTTTTACAAAACCATATATGTA 2940
| | | | |

Db 3000 AACGAAACTGGAATCATTAATCAAAATTAACATGAGACTTTTACAAAACCATATATGTA 3059
| | | | |
QY 2941 CCACACATTTTCCCATCAAGTCAATTTGTTAAAAACCTAATGTAAAGAAAAATTCGTAGAG 3000
| | | | |
Db 3060 CCACACATTTTCCCATCAAGTCAATTTGTTAAAAACCTAATGTAAAGAAAAATTCGTAGAG 3119
| | | | |
QY 3001 GAAACCTTTGAGAAACATTCAAATGTCACTGAAAGAGAAATGGGAAATGAAACATTTCA 3060
| | | | |
Db 3120 GAAACCTTTGAGAAACATTCAAATGTCACTGAAAGAGAAATGGGAAATGAAACATTTCA 3179
| | | | |
QY 3061 AGTACAGTGAACAAATTTAGCCGTTATTAATTAAGAAAAATGTTTAAAGAGCCAGC 3120
| | | | |
Db 3180 AGTACAGTGAACAAATTTAGCCGTTATTAATTAAGAAAAATGTTTAAAGAGCCAGC 3239
| | | | |
QY 3121 TCAAGCAATTAATTAAGAAAGTAGTTCAGTACTAATGAATGAGGCTCCAGTATTAATGA 3180
| | | | |
Db 3240 TCAAGCAATTAATTAAGAAAGTAGTTCAGTACTAATGAATGAGGCTCCAGTATTAATGA 3299
| | | | |
QY 3181 ATAGGTTCCAGTGAATGAACATTCAGAGCAAGACTAGTGAAGAAACAGAGGCCAAATTTG 3240
| | | | |
Db 3300 ATAGGTTCCAGTGAATGAACATTCAGAGCAAGACTAGTGAAGAAACAGAGGCCAAATTTG 3359
| | | | |
QY 3241 AATGCTATGCTTAATTAAGGAGGTTTCCAACTGAGGCTTATAAACAAGTCTTCCGTGA 3300
| | | | |
Db 3360 AATGCTATGCTTAATTAAGGAGGTTTCCAACTGAGGCTTATAAACAAGTCTTCCGTGA 3419
| | | | |
QY 3301 AGTAAATGTGAACATCTCTGAATAATTAAGAAACCAAGAAATGAAAGAGTTCAGACTGT 3360
| | | | |
Db 3420 AGTAAATGTGAACATCTCTGAATAATTAAGAAACCAAGAAATGAAAGAGTTCAGACTGT 3479
| | | | |
QY 3361 AATACAGATTTCTCCATATCTGATTTCAAGATTAAGTGAACAGCCATGGAAGTACT 3420
| | | | |
Db 3480 AATACAGATTTCTCCATATCTGATTTCAAGATTAAGTGAACAGCCATGGAAGTACT 3539
| | | | |
QY 3421 CATGATCTCAGGTTTGTGTGAGACACCGATGACCTGTATGATGAGTGAATTAAG 3480
| | | | |
Db 3540 CATGATCTCAGGTTTGTGTGAGACACCGATGACCTGTATGATGAGTGAATTAAG 3599
| | | | |
QY 3481 GAAGATCTAGTTTGTGTAATAATGACATTAAGAAAGTCTGCTGTTTATGCAAAAGC 3540
| | | | |
Db 3600 GAAGATCTAGTTTGTGTAATAATGACATTAAGAAAGTCTGCTGTTTATGCAAAAGC 3659
| | | | |
QY 3541 GTCCAGAAAGAGAGCTTACAGAGAGTCTTACGCCCTTTTACCCATACATTTGGCTCAG 3600
| | | | |
Db 3660 GTCCAGAAAGAGAGCTTACAGAGAGTCTTACGCCCTTTTACCCATACATTTGGCTCAG 3719
| | | | |
QY 3601 GGTACCGAAGAGAGGCGCAAGAAATTAAGTTCCTCAGAAAGAACTTATCTAGTGAAGAT 3660
| | | | |
Db 3720 GGTACCGAAGAGAGGCGCAAGAAATTAAGTTCCTCAGAAAGAACTTATCTAGTGAAGAT 3779
| | | | |
QY 3661 GAAGAGCTTCCCTGCTTCCAAACACTTGTGTTTGTGAAGTAAACATAATACCTTCTCAG 3720
| | | | |
Db 3780 GAAGAGCTTCCCTGCTTCCAAACACTTGTGTTTGTGAAGTAAACATAATACCTTCTCAG 3839
| | | | |
QY 3721 TCTACTAGGCAATGACACCTGTTGCTACCGAGTGTCTGTAAAGAACACAGAGAAATTTA 3780
| | | | |
Db 3840 TCTACTAGGCAATGACACCTGTTGCTACCGAGTGTCTGTAAAGAACACAGAGAAATTTA 3899
| | | | |
QY 3781 TTATCATTTGAAGATTAATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT 3840
| | | | |
Db 3900 TTATCATTTGAAGATTAATTAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGTGAAGT 3959
| | | | |
QY 3841 CAGGACATCACTTATGAGAGAAACAAATGTTGCTAGTGTGTTTCTTCAAGTGC 3900
| | | | |
Db 3960 CAGGACATCACTTATGAGAGAAACAAATGTTGCTAGTGTGTTTCTTCAAGTGC 4019
| | | | |
QY 3901 AGTGAATTTGAAGACTTACTGCAAAATTAACAACACCCAGAGTCTTTCTGATTTGTTCT 3960
| | | | |
Db 4020 AGTGAATTTGAAGACTTACTGCAAAATTAACAACACCCAGAGTCTTTCTGATTTGTTCT 4079
| | | | |
QY 3961 TCCAAACAAATGAGGATCACTGCTGAAGAGCCAGAGGAGTTGCTGAGTGAACAGGAATTTG 4020
| | | | |

Db 4080 TCCAAATGAGGATCAGTCTGAAACCGAGGAGTTGGTCTGAGTGAAGAGAAATG 4139
 QY 4021 GTTTCAGATGATGAAGAAGAGAAAGGGCTTGAAGAAATTAATCAAGAGAGAAAGC 4080
 Db 4140 GTTTCAGATGATGAAGAAGAGAAAGGGCTTGAAGAAATTAATCAAGAGAGAAAGC 4199
 QY 4081 ATGATTTCAAACTTAAAGTGAAGCAGCATCTGGGTGTGAGTGAAGAAACAGGCTCTGAA 4140
 Db 4200 ATGATTTCAAACTTAAAGTGAAGCAGCATCTGGGTGTGAGTGAAGAAACAGGCTCTGAA 4259
 QY 4141 GACTGTCTAGGGCTATCTCTCAAGTACATTTTAACTCTCAGCAGAGGATACCATG 4200
 Db 4260 GACTGTCTAGGGCTATCTCTCAGTACATTTTAACTCTCAGCAGAGGATACCATG 4319
 QY 4201 CAACATTAACCTGATTAAGCTCCAGCAGGAATGGCTGAAGTGAAGTGTGTAACAG 4260
 Db 4320 CAACATTAACCTGATTAAGCTCCAGCAGGAATGGCTGAAGTGAAGTGTGTAACAG 4379
 QY 4261 CATGGAGCCAGCCTTTTACAGAGTACCTTCATCATAGTACTCTTCCCTTGAG 4320
 Db 4380 CATGGAGCCAGCCTTTTACAGAGTACCTTCATCATAGTACTCTTCCCTTGAG 4439
 QY 4321 GACTCGGAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAATTCAAGAAAGT 4380
 Db 4440 GACTCGGAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAATTCAAGAAAGT 4499
 QY 4381 AGTGAATACCTTAAAGCCAGAAATCCAGAAAGCCTTCTGCTGAACAACTTGAAGTGTCT 4440
 Db 4500 AGTGAATACCTTAAAGCCAGAAATCCAGAAAGCCTTCTGCTGAACAACTTGAAGTGTCT 4559
 QY 4441 GCAGATAGTTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCACTCCCTTCTAAA 4500
 Db 4560 GCAGATAGTTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCACTCCCTTCTAAA 4619
 QY 4501 TGCCCATCATAGATAGATAGTGTACATGCACAGATTTCTGGAGAGTCTCAGAAATGA 4560
 Db 4620 TGCCCATCATAGATAGTGTGTACATGCACAGATTTCTGGAGAGTCTCAGAAATGA 4679
 QY 4561 AACTACCATCTCAAGAGAGCTCATTAAGTGTGTGATGAGAGACCAACAGCTGGA 4620
 Db 4680 AACTACCATCTCAAGAGAGCTCATTAAGTGTGTGATGAGAGACCAACAGCTGGA 4739
 QY 4621 GAGTCTGGGCCACAGATTTGACGAAACATCTTATGCGCAAGCAAGATCTAGAGGA 4680
 Db 4740 GAGTCTGGGCCACAGATTTGACGAAACATCTTATGCGCAAGCAAGATCTAGAGGA 4799
 QY 4681 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGTATGATGACCTGGAATCTGATCTCT 4740
 Db 4800 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGTATGATGACCTGGAATCTGATCTCT 4859
 QY 4741 GAAGACAGAGCCCAAGATGAGTGTGCGCAACATACATCTTCAACCTGCGCATG 4800
 Db 4860 GAAGACAGAGCCCAAGATGAGTGTGCGCAACATACATCTTCAACCTGCGCATG 4919
 QY 4801 AAAGTTCGCCAATGAAGTGTGCAAGATCTGCCAGAGTCCAGTGTCTCATACTACT 4860
 Db 4920 AAAGTTCGCCAATGAAGTGTGCAAGATCTGCCAGAGTCCAGTGTCTCATACTACT 4979
 QY 4861 GATCTGTGTGTATATGCAATGAGAGAAAGTGTGAGCAGAGAGAGAGCAAGATGACA 4920
 Db 4980 GATCTGTGTGTATATGCAATGAGAGAAAGTGTGAGCAGAGAGAGAGCAAGATGACA 5039
 QY 4921 GCTTCAACAGAAAGGCTCAACAAAGATGTCCATGGTGTGTGCGCTACACCCAGAA 4980
 Db 5040 GCTTCAACAGAAAGGCTCAACAAAGATGTCCATGGTGTGTGCGCTACACCCAGAA 5099
 QY 4981 GAATTTATGCTGCTGATCAAGTGTGCGAAGAAACACACATCACTTTAACTAATTAAT 5040
 Db 5100 GAATTTATGCTGCTGATCAAGTGTGCGAAGAAACACACATCACTTTAACTAATTAAT 5159
 QY 5041 ACTGAAGAGACTACTCATGTTGTATGAAAAACAGATGCTGAGTTGTGTGAAAGGACA 5100
 Db 5160 ACTGAAGAGACTACTCATGTTGTATGAAAAACAGATGCTGAGTTGTGTGAAAGGACA 5219

QY 5101 CTGAATATATTTCTAGATTTGCGGAGAGAAATGGTATGATTAATTTCTGGGTGACC 5160
 Db 5220 CTGAATATATTTCTAGATTTGCGGAGAGAAATGGTATGATTAATTTCTGGGTGACC 5279
 QY 5161 CAGTCTATTAAGAAAGAAATGCTGAATGAGTATTTTGAATGACAGAGAGATGTG 5220
 Db 5280 CAGTCTATTAAGAAAGAAATGCTGAATGAGTATTTTGAATGACAGAGAGATGTG 5339
 QY 5221 GTCAATGGAAGAAACCCAGAGTCCAAAGCAGCAAGAGAAATCCAGAGCAAGAAATG 5280
 Db 5340 GTCAATGGAAGAAACCCAGAGTCCAAAGCAGCAAGAGAAATCCAGAGCAAGAAATG 5399
 QY 5281 TTCAGGGGCTTGAATCTGTTGATGAGGCTTACCAACATGCCCCAGATCAACTG 5340
 Db 5400 TTCAGGGGCTTGAATCTGTTGATGAGGCTTACCAACATGCCCCAGATCAACTG 5459
 QY 5341 GAATGATGTAACAGCTGTGTGCTCTGTGTGTAAGAGACCTTTCATTCACCTT 5400
 Db 5460 GAATGATGTAACAGCTGTGTGCTCTGTGTGTAAGAGACCTTTCATTCACCTT 5519
 QY 5401 GGCACAGTGTCCACCAATTTGTGTGACAGCAATGCTGACAGAGAGCAATGTC 5460
 Db 5520 GGCACAGTGTCCACCAATTTGTGTGACAGCAATGCTGACAGAGAGCAATGTC 5579
 QY 5461 TTCATGCAATTTGGCAGATGTGTGAGGCACTGTGTGAGCCGAGAGTGGTGTGAC 5520
 Db 5580 TTCATGCAATTTGGCAGATGTGTGAGGCACTGTGTGAGCCGAGAGTGGTGTGAC 5639
 QY 5521 AGTGAAGCACTTACAGTGTCCAGAGAGTGTGACACCTATCTGATACCCAGATCCCCAC 5580
 Db 5640 AGTGAAGCACTTACAGTGTCCAGAGAGTGTGACACCTATCTGATACCCAGATCCCCAC 5699
 QY 5581 AGCCACTAC 5589
 Db 5700 AGCCACTAC 5708

RESULT 9

US-08-480-784-1

; Sequence 1, Application US/08480784

; Patent No. 5693473

; GENERAL INFORMATION:

; APPLICANT: Skolnick, Mark H.

; APPLICANT: Goldgar, David E.

; APPLICANT: Miki, Yoshio

; APPLICANT: Swenson, Jeff

; APPLICANT: Ramb, Alexander

; APPLICANT: Harshman, Keith D.

; APPLICANT: Shattuck-Eidens, Donna M.

; APPLICANT: Tavliqian, Sean V.

; APPLICANT: Wiseman, Roger W.

; APPLICANT: Futreal, P. Andrew

; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer

; NUMBER OF SEQUENCES: 85

; CORRESPONDENCE ADDRESS:

; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP

; STREET: 1201 New York Avenue, N.W., Suite 1000

; CITY: Washington

; STATE: DC

; COUNTRY: USA

; ZIP: 20005

; COMPUTER READABLE FORM:

; MEDIUM TYPE: Floppy disk

; COMPUTER: IBM PC compatible

; OPERATING SYSTEM: PC-DOS/MS-DOS

; SOFTWARE: Patentin Release #1.0, Version #1.30

; CURRENT APPLICATION DATA:

; FILING DATE: US/08/480,784

; CLASSIFICATION: 435

; PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 120..5711
US-08-480-784-1

Query Match 99.9%; Score 5585.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGATTTATCTGCTTCGCGTTGAGAGATACAAATGTCATTATGCTATGAGAAA 60
DB 120 ATGATTTATCTGCTTCGCGTTGAGAGATACAAATGTCATTATGCTATGAGAAA 179
QY 61 ATCTTAGAGTGTCCATCTGCTGTGAGTTGATCAAGAACTGTCTCCACAAAGTGTGAC 120
DB 180 ATCTTAGAGTGTCCATCTGCTGTGAGTTGATCAAGAACTGTCTCCACAAAGTGTGAC 239
QY 121 CACATATTTTGCATATTTGATGCTGAACTTCTCAACCAAGAAAGGGCTTCACAG 180
DB 240 CACATATTTTGCATATTTGATGCTGAACTTCTCAACCAAGAAAGGGCTTCACAG 299
QY 181 TGTCTTATATGAAGATATATACCAAAAGAGCTACAAAGAAAGTACAGATTAGT 240
DB 300 TGTCTTATATGAAGATATATACCAAAAGAGCTACAAAGAAAGTACAGATTAGT 359
QY 241 CACATTTGTGAAGACTATTTGAAATCAATTTGTCTTTCAGCTTGACACAGTTTGAG 300
DB 360 CACATTTGTGAAGACTATTTGAAATCAATTTGTCTTTCAGCTTGACACAGTTTGAG 419
QY 301 TATCCAAACAGCTTAATTTTGCACAAAGAAATTAATCTCTCCGAAACATCTAAAGAT 360
DB 420 TATCCAAACAGCTTAATTTTGCACAAAGAAATTAATCTCTCCGAAACATCTAAAGAT 479
QY 361 GAATTTCTATCATCAAAAGATGAGTACAGAAACCTGCCAAAGACTTCTACAGAGT 420
DB 480 GAATTTCTATCATCAAAAGATGAGTACAGAAACCTGCCAAAGACTTCTACAGAGT 539
QY 421 GAACCCGAAAATCTTCCCTGACAGAAACAGAGTCAAGTGTCCAACTCTTAACCTTGA 480
DB 540 GAACCCGAAAATCTTCCCTGACAGAAACAGAGTCAAGTGTCCAACTCTTAACCTTGA 599

QY 481 ACTGTGAGAACTCTGAGGACAAAGAGCGGATACAACTCAAAAGACCTGTCTACATT 540
DB 600 ACTGTGAGAACTCTGAGGACAAAGAGCGGATACAACTCAAAAGACCTGTCTACATT 659
QY 541 GAATTTGGATCTGATTTCTTGAAGATACCGTTAATAGGCAACTTATGTGAGTGGGA 600
DB 660 GAATTTGGATCTGATTTCTTGAAGATACCGTTAATAGGCAACTTATGTGAGTGGGA 719
QY 601 GATCAAGAAATTTGTCAAAATCACCCCTCAAGAACCAAGATGAATATCAGTTGATCT 660
DB 720 GATCAAGAAATTTGTCAAAATCACCCCTCAAGAACCAAGATGAATATCAGTTGATCT 779
QY 661 GCAAAAAAGCGCTGTGTAATTTTCTGAGACGATGTACAAATTAAGTCAATCATCAA 720
DB 780 GCAAAAAAGCGCTGTGTAATTTTCTGAGACGATGTACAAATTAAGTCAATCATCAA 839
QY 721 CCCAGTAATTAATGATTTAACAACCACTGAGAAAGGTGAGTGTGAGAGGATCCAGAAAG 780
DB 840 CCCAGTAATTAATGATTTAACAACCACTGAGAAAGGTGAGTGTGAGAGGATCCAGAAAG 899
QY 781 TATCAGGGTACTTCTGTTCAAACTGATGTGAGCCATGTGGCACAAATACATCATGCC 840
DB 900 TATCAGGGTACTTCTGTTCAAACTGATGTGAGCCATGTGGCACAAATACATCATGCC 959
QY 841 ACCCTATTACAGCATGAGAACAGCAGTTTATTCTCACTAAGACAGATGATGTAGAA 900
DB 960 ACCCTATTACAGCATGAGAACAGCAGTTTATTCTCACTAAGACAGATGATGTAGAA 1019
QY 901 AAGGCTGAATCTGTAAATTAAGCAAAAGCGCTGTGAGAGGACCAACATTAAGCA 960
DB 1020 AAGGCTGAATCTGTAAATTAAGCAAAAGCGCTGTGAGAGGACCAACATTAAGCA 1079
QY 961 TGGGCTGAGAGTAAGAAACATGTAATGATAGGGGAGATCCACACAGAAAAAGATA 1020
DB 1080 TGGGCTGAGAGTAAGAAACATGTAATGATAGGGGAGATCCACACAGAAAAAGATA 1139
QY 1021 GATCTGAATGCTGATCCCTGTGTGAGAGAAATGGAATTAAGCAAAAGTCCATGCC 1080
DB 1140 GATCTGAATGCTGATCCCTGTGTGAGAGAAATGGAATTAAGCAAAAGTCCATGCC 1199
QY 1081 TCAGAGAAATCCAGAGATGATGAGATGTTCTTGATTAACATAATTAAGAGATTCAG 1140
DB 1200 TCAGAGAAATCCAGAGATGATGAGATGTTCTTGATTAACATAATTAAGAGATTCAG 1259
QY 1141 AAAGTTAATGAGTGTCTTCCAGAAAGTATGATGTTAGTTGATGACTACATGAT 1200
DB 1260 AAAGTTAATGAGTGTCTTCCAGAAAGTATGATGTTAGTTGATGACTACATGAT 1319
QY 1201 GGGGAGTCTGAATCAAAATGCCAAAGTACCTATGATGACGTTCTAAATGAGGTAGAT 1260
DB 1320 GGGGAGTCTGAATCAAAATGCCAAAGTACCTATGATGACGTTCTAAATGAGGTAGAT 1379
QY 1261 GAATTAATGCTGTCTTCCAGAAATTAAGTATGATGAGGAGTCTCTCATGAGGCTTGA 1320
DB 1380 GAATTAATGCTGTCTTCCAGAAATTAAGTATGATGAGGAGTCTCTCATGAGGCTTGA 1439
QY 1321 AATGTAAAGTGAAGAGTCTCACTCAAAATCAATAGATTAATTAAGTGAAGCAAAATA 1380
DB 1440 AATGTAAAGTGAAGAGTCTCACTCAAAATCAATAGATTAATTAAGTGAAGCAAAATA 1499
QY 1381 TTTGGGAAACCTATGGAAGAAAGCAAGGCTCCCAACTTAAGCCATGATCAAGAAAT 1440
DB 1500 TTTGGGAAACCTATGGAAGAAAGCAAGGCTCCCAACTTAAGCCATGATCAAGAAAT 1559
QY 1441 CTAATTAATAGAGATTTGTACTGAGCCACAGATTAATTAAGAGGCTCCCTCACAAAAT 1500
DB 1560 CTAATTAATAGAGATTTGTACTGAGCCACAGATTAATTAAGAGGCTCCCTCACAAAAT 1619
QY 1501 AAATTAAGGCTAAAGAGACCTTACATCAGGCTTCATCTGAGATTTTATCAAGAAA 1560
DB 1620 AAATTAAGGCTAAAGAGACCTTACATCAGGCTTCATCTGAGATTTTATCAAGAAA 1679
QY 1561 GCAGATTTGGCAGTTCAAAAGACTCTGGAATGATTAATCAGGGAACATAACCAAGGAG 1620

1680 GCAGATTTGGCAGTTCAAAAGACCTCGAATGATTAATCAGGGAACTAACCAAGCGAG 1739
1621 CAGAAATGCTCAAGATGATGATATTTACTATATAGTGTCTAGGAAATAAACAAAGGTGAT 1680
1740 CAGATGGTCAAGATGATGATATTTACTATATAGTGTCTAGGAAATAAACAAAGGTGAT 1739
1681 TCTATTCGAAATGAGAAAATCTTACCCATAGATCTGAGAAAAGATCGCTTC 1740
1800 TCTATTCGAAATGAGAAAATCTTACCCATAGATCTGAGAAAAGATCGCTTC 1859
1741 AAAAGAAAGCTGAACCTATTAAGCAGCAGTAAAGCATATGAACTGAAATTAATATC 1800
1860 AAAAGAAAGCTGAACCTATTAAGCAGCAGTAAAGCATATGAACTGAAATTAATATC 1919
1801 CACAAATTCAAAAGCAGCTAAAAGAAATAGCTGAGGAGAAAGCTTCTACAGGCATAT 1860
1920 CACAAATTCAAAAGCAGCTAAAAGAAATAGCTGAGGAGAAAGCTTCTACAGGCATAT 1979
1861 CATGCGCTTGAACCTAGTATGAGAAATCTAAGCCACCTAATTTGACTGAAATGCA 1920
1980 CATGCGCTTGAACCTAGTATGAGAAATCTAAGCCACCTAATTTGACTGAAATGCA 2039
1921 ATTGATAGTGTCTAGCAGTGAAGAGATTAAGAAAAGAAAGTACCAACCAATGCCAGTC 1980
2040 ATTGATAGTGTCTAGCAGTGAAGAGATTAAGAAAAGTACCAACCAATGCCAGTC 2039
1981 AGGCACAGCAGAAACCTTACAACTATGAGAGTTAAAGACCTGCACTGAGCCAGAG 2040
2100 AGGCACAGCAGAAACCTTACAACTATGAGAGTTAAAGACCTGCACTGAGCCAGAG 2159
2041 AGTAAACAGCCAAATGAGACAGACAAAGTAAAGACATGACAGTACTTCCAGAGCTG 2100
2160 AGTAAACAGCCAAATGAGACAGACAAAGTAAAGACATGACAGTACTTCCAGAGCTG 2219
2101 AAGTTAACAAATGACACCTGCTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 2160
2220 AAGTTAACAAATGACACCTGCTTCTTACTAAGTGTTCAAATACAGTGAATTAAGAA 2279
2161 TTTGTCAATCTTACCTTCCAAAGAGAAAGAAAGAAAGAAAGTAAAGTAAAGT 2220
2280 TTTGTCAATCTTACCTTCCAAAGAGAAAGAAAGAAAGAAAGTAAAGTAAAGT 2339
2221 TCTATATATGCTGAGAGACCCCAAGATCTCATTTAAGTGAAGAGGTTTCCAACT 2280
2340 TCTATATATGCTGAGAGACCCCAAGATCTCATTTAAGTGAAGAGGTTTCCAACT 2339
2281 GAAAGATCTGTAGAGATGAGCAGTATTTCAATTTGCTAGCTGATGATTAAGCAGCTAG 2340
2400 GAAAGATCTGTAGAGATGAGCAGTATTTCAATTTGCTAGCTGATGATTAAGCAGCTAG 2459
2341 GAAAGTATCTGTACTGAGAGTTAGACATCTAGGAAAGCAGAAACAGAACTAAATAA 2400
2460 GAAAGTATCTGTACTGAGAGTTAGACATCTAGGAAAGCAGAAACAGAACTAAATAA 2519
2401 TGTGTGAGTGTGAGTGTGAGATTTGAAAACCCCAAGGACTAATTCATGTTGTTCCAA 2460
2520 TGTGTGAGTGTGAGTGTGAGATTTGAAAACCCCAAGGACTAATTCATGTTGTTCCAA 2579
2461 GATATATGAAATGACACAGAAAGGCTTAAAGTATCCATTTGGACATGAAGTTAACACAGT 2520
2580 GATATATGAAATGACACAGAAAGGCTTAAAGTATCCATTTGGACATGAAGTTAACACAGT 2639
2521 CGGAAACAAAGCATAGAAATGAGAAAGTAACTGTAGCTGCTAGTTTGCAGAAATACA 2580
2640 CGGAAACAAAGCATAGAAATGAGAAAGTAACTGTAGCTGCTAGTTTGCAGAAATACA 2699
2581 TTCAAGGTTTCAAGCCAGTCAATTTGCTGTTTCAATTCAGAGAAATGAGAGAG 2640
2700 TTCAAGGTTTCAAGCCAGTCAATTTGCTGCTGTTTCAATTCAGAGAAATGAGAGAG 2759
2641 GAATGTGCAACATTTCTGCCCACCTGTGGTCTTAAAGAAACAAAGTCCAAAGTCACT 2700

2760 GAATGTGCAACATTTCTGCCACCTGTGGTCTTAAAGAAACAAAGTCCAAAGTCACT 2819
2701 TTTGATGTGACAAAGAGAAATATCAGAGAAATGAGTCTAATATCAAGCTCTA 2760
2820 TTTGATGTGACAAAGAGAAATATCAGAGAAATGAGTCTAATATCAAGCTCTA 2879
2761 CAGAGATTAATATCAGTGCAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2820
2880 CAGAGATTAATATCAGTGCAGGCTTCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT 2939
2821 AATGCCAAATGATATCAAGAGAGGCTAGGTTTGTCTATCATCTCACTTCAAGAGGC 2880
2940 AATGCCAAATGATATCAAGAGAGGCTAGGTTTGTCTATCATCTCACTTCAAGAGGC 2999
2881 AACGAACTGACATCTTCTCCAAATTAACATGAGCTTTTACAAACCCATATCTGATA 2940
3000 AACGAACTGACATCTTCTCCAAATTAACATGAGCTTTTACAAACCCATATCTGATA 3059
2941 CCACGACTTTTCCATCAAGTCAATTTGTTTAAACTAATGTAAGAAAATCTGCTAGAG 3000
3060 CCACGACTTTTCCATCAAGTCAATTTGTTTAAACTAATGTAAGAAAATCTGCTAGAG 3119
3001 GAAACCTTGAAGAACATTCATGTCACCTGAAGAGAAATGGGAAATGAGAACATTTCCA 3060
3120 GAAACCTTGAAGAACATTCATGTCACCTGAAGAGAAATGGGAAATGAGAACATTTCCA 3179
3061 AGTACAGTGAACAAATTAAGCCGTTATTAACATTTAGAGAAATGTTTAAAGAGCCAGC 3120
3180 AGTACAGTGAACAAATTAAGCCGTTATTAACATTTAGAGAAATGTTTAAAGAGCCAGC 3239
3121 TCAAGCAATTAATGAAGTGTGCTCCAGTCTAATGAAGTGGGCTCCAGTATTAATGA 3180
3240 TCAAGCAATTAATGAAGTGTGCTCCAGTCTAATGAAGTGGGCTCCAGTATTAATGA 3299
3181 ATAGGTTCCAGTGTGAAGAACATTCAGACAGAACTAGTGAAGAAAGAGGCCAAATTTG 3240
3300 ATAGGTTCCAGTGTGAAGAACATTCAGACAGAACTAGTGAAGAAAGAGGCCAAATTTG 3359
3241 AATGCTATGCTTAATTAAGGCGTTTGAACCTGAGGCTTAAACAAAGTCTTCTGGA 3300
3360 AATGCTATGCTTAATTAAGGCGTTTGAACCTGAGGCTTAAACAAAGTCTTCTGGA 3419
3301 AGTAAATGTAAGCAATTCGAAATTAAGAAAGCAAGTAAAGTAAAGTAAAGTAAAGT 3360
3420 AGTAAATGTAAGCAATTCGAAATTAAGAAAGCAAGTAAAGTAAAGTAAAGTAAAGT 3479
3361 AATACAGATTTCTCTCATATCTGATTTACATTAAGTAAAGCAGCCATAGGGAATAGT 3420
3480 AATACAGATTTCTCTCATATCTGATTTACATTAAGTAAAGCAGCCATAGGGAATAGT 3539
3421 CATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTTAGATGATGGAATTAAG 3480
3540 CATGATCTCAGGTTTGTCTGAGACACCTGATGACCTGTTAGATGATGGAATTAAG 3599
3481 GAATATCTAGTTTGTGGAAGATGACATTAAGAAAGTGTGCTGTTTAAAGCAAAAGC 3540
3600 GAATATCTAGTTTGTGGAAGATGACATTAAGAAAGTGTGCTGTTTAAAGCAAAAGC 3659
3541 GTCCAGAAAGAGAGCTTGAAGAGTCTAGCCCTTACCCATACATTAATTTGGCTAG 3600
3660 GTCCAGAAAGAGAGCTTGAAGAGTCTAGCCCTTACCCATACATTAATTTGGCTAG 3719
3601 GGTTCAGGAAGAGGCGCCAGAAATTAAGATGCTCAGAGAAAGTATTTCTAGAGAGAT 3660
3720 GGTTCAGGAAGAGGCGCCAGAAATTAAGATGCTCAGAGAAAGTATTTCTAGAGAGAT 3779
3661 GAAGAGCTTCCCTCTCCAAACATTTGATTTGTAAGTAAGTAAGTAAGTAAGTAAGTAAG 3720
3780 GAAGAGCTTCCCTCTCCAAACATTTGATTTGTAAGTAAGTAAGTAAGTAAGTAAGTAAG 3839
3721 TCTACTAGCATAGCACCGTTGCTACGAGTGTCTAAGAAACAGAGAGAGATTTA 3780
3840 TCTACTAGCATAGCACCGTTGCTACGAGTGTCTAAGAAACAGAGAGAGATTTA 3899

QY 3781 TTATCATGGAATAGCTTAATGACTGCTACATAACAGCTAATATTTGGCAAAAGCATCT 3840
 Db 3900 TTATCATGGAATAGCTTAATGACTGCTACATAACAGCTAATATTTGGCAAAAGCATCT 3959
 QY 3841 CAGGAACTACCTTAGTGAGGAAACAAATGTTCTGCTAGCTGTTTCTTCCACAGTCC 3900
 Db 3960 CAGGAACTACCTTAGTGAGGAAACAAATGTTCTGCTAGCTGTTTCTTCCACAGTCC 4019
 QY 3901 AGTGAATGGAAGACTTACTGCTCAATATCAACACCCAGAGATCCTTCTGATGTTGCT 3960
 Db 4020 AGTGAATGGAAGACTTACTGCTCAATATCAACACCCAGAGATCCTTCTGATGTTGCT 4079
 QY 3961 TCACAAACAATGAGGCATCAGTCTGAAGCCAGGAGTTGGTCTGAGTACAGGAATG 4020
 Db 4080 TCACAAACAATGAGGCATCAGTCTGAAGCCAGGAGTTGGTCTGAGTACAGGAATG 4139
 QY 4021 GTTTCAGTGAATGGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4080
 Db 4140 GTTTCAGTGAATGGAAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4199
 QY 4081 ATGATTCGAATAGTGAAGCAGCATCTGGGTGTGAGAGTGAACAAGAGAGAGAGAGAG 4140
 Db 4200 ATGATTCGAATAGTGAAGCAGCATCTGGGTGTGAGAGTGAACAAGAGAGAGAGAGAG 4259
 QY 4141 GACTGCTCAGGCTATCTCTCAGAGTACATTTTAACTCAGCAGAGAGAGAGAGAGAG 4200
 Db 4260 GACTGCTCAGGCTATCTCTCAGAGTACATTTTAACTCAGCAGAGAGAGAGAGAGAG 4319
 QY 4201 CAATATACCTGATTAAGCTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4260
 Db 4320 CAATATACCTGATTAAGCTCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4379
 QY 4261 CATGGAGCCAGCCCTTCTACAGCTACCTTCCATCATAGTACTCTCTCCCTTGAG 4320
 Db 4380 CATGGAGCCAGCCCTTCTACAGCTACCTTCCATCATAGTACTCTCTCCCTTGAG 4439
 QY 4321 GACTGGCAATTCAGAAACAAGCAGATCAGAAAAAGCAGTATTAATCTTACAGAAAGT 4380
 Db 4440 GACTGGCAATTCAGAAACAAGCAGATCAGAAAAAGCAGTATTAATCTTACAGAAAGT 4499
 QY 4381 AGTGAATACCTATTAAGCAGAGATCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4440
 Db 4500 AGTGAATACCTATTAAGCAGAGATCCAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 4559
 QY 4441 GCAGATAGTTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAA 4500
 Db 4560 GCAGATAGTTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAA 4619
 QY 4501 TGCCCATCATAGATAGTGTGATGATGATGATGATGATGATGATGATGATGATGATG 4560
 Db 4620 TGCCCATCATAGATAGTGTGATGATGATGATGATGATGATGATGATGATGATGATG 4679
 QY 4561 AACTACCATCATCAAGAGAGAGCTCATTAAGTTGATGATGATGATGATGATGATGATG 4620
 Db 4680 AACTACCATCATCAAGAGAGAGCTCATTAAGTTGATGATGATGATGATGATGATGATG 4739
 QY 4621 GAGTCTGGGCCACAGATTTGACGGAACATTTACTTGCAGAGCAAGATCTAGAGGA 4680
 Db 4740 GAGTCTGGGCCACAGATTTGACGGAACATTTACTTGCAGAGCAAGATCTAGAGGA 4799
 QY 4681 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGATGATGATGATGATGATGATGATG 4740
 Db 4800 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGATGATGATGATGATGATGATGATG 4859
 QY 4741 GAAGACAGAGCCCAAGAGTCAAGCTGCTGATGATGATGATGATGATGATGATGATGATG 4800
 Db 4860 GAAGACAGAGCCCAAGAGTCAAGCTGCTGATGATGATGATGATGATGATGATGATGATG 4919
 QY 4801 AAGTTCCTCCCAATTTGAAGTTGACGAATCTGCCAGAGTCCAGAGTCTGCTCATCTACT 4860
 Db 4920 AAGTTCCTCCCAATTTGAAGTTGACGAATCTGCCAGAGTCCAGAGTCTGCTCATCTACT 4979

QY 4861 GATAGCTGGGTATATGCAATGGAAGAGTGTGACAGAGAGAGAGAGAGAGAGAGAGAG 4920
 Db 4980 GATAGCTGGGTATATGCAATGGAAGAGTGTGACAGAGAGAGAGAGAGAGAGAGAGAG 5039
 QY 4921 GCTTACAGAAAGGCTCAACAAAGATGTCCATGTGTGTGTGTGTGTGTGTGTGTGTGT 4980
 Db 5040 GCTTACAGAAAGGCTCAACAAAGATGTCCATGTGTGTGTGTGTGTGTGTGTGTGTGT 5099
 QY 4981 GAATTTATGCTGTACAGATTTGCTGAGAAACACCATCATCTTAATCTAATCTAAT 5040
 Db 5100 GAATTTATGCTGTGTACAGATTTGCTGAGAAACACCATCATCTTAATCTAATCTAAT 5159
 QY 5041 ACTGAAGACTACTCATGTGTGTATGAAGAGAGTGTGATGATGATGATGATGATGATG 5100
 Db 5160 ACTGAAGACTACTCATGTGTGTATGAAGAGAGTGTGATGATGATGATGATGATGATG 5219
 QY 5101 CTGAATATTTTCTGGAATTTGCGGAGAGAAATGGAGTGTACTATTTCTGAGTACC 5160
 Db 5220 CTGAATATTTTCTGGAATTTGCGGAGAGAAATGGAGTGTACTATTTCTGAGTACC 5279
 QY 5161 CAGTCTATTAAGAAAGAAATGCTGAATGAGATGATTTTGAAGTCCAGAGAGATGTG 5220
 Db 5280 CAGTCTATTAAGAAAGAAATGCTGAATGAGATGATTTTGAAGTCCAGAGAGATGTG 5339
 QY 5221 GTCAATGGAAGAACCCCAAGTCCAAAGCAGAGAGAGAGAGAGAGAGAGAGAGAGATC 5280
 Db 5340 GTCAATGGAAGAACCCCAAGTCCAAAGCAGAGAGAGAGAGAGAGAGAGAGAGAGATC 5399
 QY 5281 TTCAGAGGGCTGAAGATCTGTTGATGAGGCTTCCACCAATGAGAGAGAGAGAGATC 5340
 Db 5400 TTCAGAGGGCTGAAGATCTGTTGATGAGGCTTCCACCAATGAGAGAGAGAGAGATC 5459
 QY 5341 GAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 5400
 Db 5460 GAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG 5519
 QY 5401 GGCACAGTGTCCACCAATTTGTGTGTGACAGCAGATGCTTGAAGAGAGAGATGAC 5460
 Db 5520 GGCACAGTGTGTCCACCAATTTGTGTGTGACAGCAGATGCTTGAAGAGAGAGATGAC 5579
 QY 5461 TTCATGCAATTTGGCAGATGATGATGATGATGATGATGATGATGATGATGATGATG 5520
 Db 5580 TTCATGCAATTTGGCAGATGATGATGATGATGATGATGATGATGATGATGATGATG 5639
 QY 5521 AGTGAAGCTCTACCAAGTCCAGAGAGTGAAGACCTAATGATACCCAGATCCCCAC 5580
 Db 5640 AGTGAAGCTCTACCAAGTCCAGAGAGTGAAGACCTAATGATACCCAGATCCCCAC 5699
 QY 5581 AGCCACTAC 5589
 Db 5700 AGCCACTAC 5708

RESULT 10
 US-08-483-553-1
 ; Sequence 1, Application US/08483553
 ; Patent No. 570999
 ; GENERAL INFORMATION:
 ; APPLICANT: Skolnick, Mark H.
 ; APPLICANT: Goldfar, David E.
 ; APPLICANT: Miki, Yoshio
 ; APPLICANT: Swenson, Jeff
 ; APPLICANT: Kamb, Alexander
 ; APPLICANT: Harshman, Keith D.
 ; APPLICANT: Shattuck-Eidens, Donna M.
 ; APPLICANT: Travligian, Sean V.
 ; APPLICANT: Wiseman, Roger W.
 ; APPLICANT: Futreal, P. Andrew
 ; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
 ; TITLE OF INVENTION: Susceptibility Gene
 ; NUMBER OF SEQUENCES: 85
 ; CORRESPONDENCE ADDRESS:
 ; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP

STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,553
FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 120..5711
US-08-483-553-1

Query Match 99.9%; Score 5585.8; DB 1; Length 5914;
Best Local Similarly 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGGATTATCTGCTGCTGCGTTGAGAGAGTACAAAATGCTAATATGCTATGCAAAA 60
Db 120 ATGGATTATCTGCTGCTGCGTTGAGAGAGTACAAAATGCTAATATGCTATGCAAAA 179
QY 61 ATCTAGAGTGTCCCATCTGCTGAGAGTATGATCAAGGAACCTGCTCCACAAAGTGTAC 120
Db 180 ATCTAGAGTGTCCCATCTGCTGAGAGTATGATCAAGGAACCTGCTCCACAAAGTGTAC 239
QY 121 CACATATTTTGCAGATTTTGCATGCTGAGAACTTCTCAACAGAGAAAGGCGCTTCACAG 180
Db 240 CACATATTTTGCAGATTTTGCATGCTGAGAACTTCTCAACAGAGAAAGGCGCTTCACAG 299
QY 181 TGTCTTATGTAGATGATATACCAAGAGGCTTACAGAAAGTATGAGAGTTAGT 240
Db 300 TGTCTTATGTAGATGATATACCAAGAGGCTTACAGAAAGTATGAGAGTTAGT 359
QY 241 CAACTGTGTGAAGAGCTATTGAAATCATTTGTCTTTCAGCTTGACAGAGTTTGAG 300

|||||
Db 360 CAACTGTGTGAAGAGCTATTGAAATCATTTGTCTTTCAGCTTGACAGAGTTTGAG 419
QY 301 TATGCAAAACAGCTATATTTTGCAGAAAGAAATATCTCTCTGAAATCTTAAAGAT 360
Db 420 TATGCAAAACAGCTATATTTTGCAGAAAGAAATATCTCTCTGAAATCTTAAAGAT 479
QY 361 GAACTTCTATCATTCATCAAGATATGGGCTACAGAAACCGTGCAGAAAGAGCTTCACAGAT 420
Db 480 GAACTTCTATCATTCATCAAGATATGGGCTACAGAAACCGTGCAGAAAGAGCTTCACAGAT 539
QY 421 GAACCCGAAATCCCTCTGCGAGAAACAGTCTCAGTGTCACTCTCTTAACCTTGA 480
Db 540 GAACCCGAAATCCCTCTGCGAGAAACAGTCTCAGTGTCACTCTCTTAACCTTGA 599
QY 481 ACTGTGAACTCTGAGAGACAAAGCGGATACACCTCAAAAGAGCTGTCTACAT 540
Db 600 ACTGTGAACTCTGAGAGACAAAGCGGATACACCTCAAAAGAGCTGTCTACAT 659
QY 541 GAATTGGAGTGTCTCTGAGAGATACCGTTAATAAGCACTTATGAGTGGGA 600
Db 660 GAATTGGAGTGTCTCTGAGAGATACCGTTAATAAGCACTTATGAGTGGGA 719
QY 601 GATCAGAAATTTGTACAAATCACCCCTCAAGAAACAGGATGAATCATGTTGGATTCT 660
Db 720 GATCAGAAATTTGTACAAATCACCCCTCAAGAAACAGGATGAATCATGTTGGATTCT 779
QY 661 GCAAAAAAGCGCTGTTGAAATTTTCTGACAGCGATGTACAAATPACTGAAATCATCA 720
Db 780 GCAAAAAAGCGCTGTTGAAATTTTCTGACAGCGATGTACAAATPACTGAAATCATCA 839
QY 721 CCCAGTATATATGATTTGAACACACAGAGAGCGTGAAGAGATGAGAGATCCAGAAAG 780
Db 840 CCCAGTATATATGATTTGAACACACAGAGAGCGTGAAGAGATGAGAGATCCAGAAAG 899
QY 781 TATCAGGATGTTCTGTTTCAAACTTCATGTCAGGATGTCACAAATPACTGATGCC 840
Db 900 TATCAGGATGTTCTGTTTCAAACTTCATGTCAGGATGTCACAAATPACTGATGCC 959
QY 841 AGCTCATTTACAGCATGAGAACAGAGTTTATTACTACTAAGACAGAAATAGTGA 900
Db 960 AGCTCATTTACAGCATGAGAACAGAGTTTATTACTACTAAGACAGAAATAGTGA 1019
QY 901 AAGGCTGAATCTCTAATTAAGAAAGAGCGCTGTAGCAAGAGCAATATACGA 960
Db 1020 AAGGCTGAATCTCTAATTAAGAAAGAGCGCTGTAGCAAGAGCAATATACGA 1079
QY 961 TGGGCTGGAAGTAAGAAACATGTATGATAGCGGAGATCCACACAGAAAAAGGTA 1020
Db 1080 TGGGCTGGAAGTAAGAAACATGTATGATAGCGGAGATCCACACAGAAAAAGGTA 1139
QY 1021 GATCTGAATGCTATCCCTGTGTGAGAGAAAGATGATTAAGCAAACTGCCATGC 1080
Db 1140 GATCTGAATGCTATCCCTGTGTGAGAGAAAGATGATTAAGCAAACTGCCATGC 1199
QY 1081 TCAGAGATCCTAGAGATGATGAGATGTTCCCTGGATACATTAATPAGAGCATTCAG 1140
Db 1200 TCAGAGATCCTAGAGATGATGAGATGTTCCCTGGATACATTAATPAGAGCATTCAG 1259
QY 1141 AAGGTTAATGAGTGTTCAGAAAGTATGAACTGTAGTTCTGATGACTCATGAT 1200
Db 1260 AAGGTTAATGAGTGTTCAGAAAGTATGAACTGTAGTTCTGATGACTCATGAT 1319
QY 1201 GGGGAGTCTGAATCAATATGCCAAAGTACGTATATGAGAGCTTCAATAGAGTAT 1260
Db 1320 GGGGAGTCTGAATCAATATGCCAAAGTACGTATATGAGAGCTTCAATAGAGTAT 1379
QY 1261 GAATATCTGTTCTTACAGAAATATGACTTACCTGAGAGCTTCAATAGAGCTTCA 1320
Db 1380 GAATATCTGTTCTTACAGAAATATGACTTACCTGAGAGCTTCAATAGAGCTTCA 1439
QY 1321 ATATGTAAAGTGAAGAGTTCATCCAAATCAGTATAGATATATTTGAAGACAAATA 1380
|||||

Db 1440 ATATGTAAAGTGAAGAGTTCACTCCAATTCAGTAGAGTAATATTGAACAAAAATA 1499
QY 1381 TTGGGAAAACCTATCGAGAGAGGCAAGCCCTCCCACTTAAGCATTAAGTAACTGAAAT 1440
Db 1500 TTGGGAAAACCTATCGAGAGAGGCAAGCCCTCCCACTTAAGCATTAAGTAACTGAAAT 1559
QY 1441 CTAATTTATAGAGCATTTTGTACTGAGCCACAGATTAATPACAGAGCGTCCCTCACAAT 1500
Db 1560 CTAATTTATAGAGCATTTTGTACTGAGCCACAGATTAATPACAGAGCGTCCCTCACAAT 1619
QY 1501 AAATTTAAAGCGTAAAGAGACCTCATCAGGCCCTTCCTGAGGATTTTTCAGAAA 1560
Db 1620 AAATTTAAAGCGTAAAGAGACCTCATCAGGCCCTTCCTGAGGATTTTTCAGAAA 1679
QY 1561 GCAGATTTTGGAGTTTCAAAAGACCTCTGAAATGATTAATTCAGGAACTAACCAAGCGAG 1620
Db 1680 GCAGATTTTGGAGTTTCAAAAGACCTCTGAAATGATTAATTCAGGAACTAACCAAGCGAG 1739
QY 1621 CAGAAATGTCAGATGATTAATTTACTAATAGTGTCTATGAGAAATPAAAACAAAGGTGAT 1680
Db 1740 CAGAAATGTCAGATGATTAATTTACTAATAGTGTCTATGAGAAATPAAAACAAAGGTGAT 1799
QY 1681 TCTATTCAGAAATGAGAAAATCCTAACCCAAATAGAAATCAGTGAAGAAATCTGCTTC 1740
Db 1800 TCTATTCAGAAATGAGAAAATCCTAACCCAAATAGAAATCAGTGAAGAAATCTGCTTC 1859
QY 1741 AAAAGCAAGAGCTGAACCTATTAAGACAGATATTAACCAATATGGAATCTGAATTAATATC 1800
Db 1860 AAAAGCAAGAGCTGAACCTATTAAGACAGATATTAACCAATATGGAATCTGAATTAATATC 1919
QY 1801 CACAATTTCAAAAGCCTTAATAAGAAATAGGCTGAGAGAGAGTCTTTTCCAGCAGATAT 1860
Db 1920 CACAATTTCAAAAGCCTTAATAAGAAATAGGCTGAGAGAGAGTCTTTTCCAGCAGATAT 1979
QY 1861 CATCGGCTTGAAGTATAGTCACTAGTAAGAAATCTAACCCCACTAATTTGATAGTAAAGCA 1920
Db 1980 CATCGGCTTGAAGTATAGTCACTAGTAAGAAATCTAACCCCACTAATTTGATAGTAAAGCA 2039
QY 1921 ATTGATAGTTTGTCTAGCAGTGAAGAGATTAAGAAAAGTAAACCAACCAATGCGAGTC 1980
Db 2040 ATTGATAGTTTGTCTAGCAGTGAAGAGATTAAGAAAAGTAAACCAACCAATGCGAGTC 2099
QY 1981 AGGACAGCAGAAAACCTTAACAATCATGGAAGTAAAGAACTGCAACTGAGGCCAAGAG 2040
Db 2100 AGGACAGCAGAAAACCTTAACAATCATGGAAGTAAAGAACTGCAACTGAGGCCAAGAG 2159
QY 2041 AGTAACAAGCCAAATGAACAGACAAATGAAGACATGACAGTACTTTCCCAAGCTG 2100
Db 2160 AGTAACAAGCCAAATGAACAGACAAATGAAGACATGACAGTACTTTCCCAAGCTG 2219
QY 2101 AAGTTAACAAATGCACTGTTCTTTTACTAAGTGTCAAAATACCAAGTGAACCTTAAGAA 2160
Db 2220 AAGTTAACAAATGCACTGTTCTTTTACTAAGTGTCAAAATACCAAGTGAACCTTAAGAA 2279
QY 2161 TTTTGTCAATCTTACCTTCCAAAGAGAAAAGAAAAGAACTGAAAACAGTTAAAGTG 2220
Db 2280 TTTTGTCAATCTTACCTTCCAAAGAGAAAAGAAAAGAACTGAAAACAGTTAAAGTG 2339
QY 2221 TCTATATATGCTGAAGACCCCAAGATCTCATGTTAATGGAAGAGGTTTGGCAACT 2280
Db 2340 TCTATATATGCTGAAGACCCCAAGATCTCATGTTAATGGAAGAGGTTTGGCAACT 2399
QY 2281 GAAAGATCTGTAGAGAGTAGAGATTAATTTCAATGCTGCTGATTAATGAGCACTGAG 2340
Db 2400 GAAAGATCTGTAGAGAGTAGAGATTAATTTCAATGCTGCTGATTAATGAGCACTGAG 2459
QY 2341 GAAAGATCTGTAGAGAGTAGAGATTAATTTCAATGCTGCTGATTAATGAGCACTGAG 2400
Db 2460 GAAAGATCTGTAGAGAGTAGAGATTAATTTCAATGCTGCTGATTAATGAGCACTGAG 2519
QY 2401 TGTGTAGTCAAGTGTGAGCATTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAA 2460
Db 2520 TGTGTAGTCAAGTGTGAGCATTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAA 2579

QY 2461 GATTAATAGAAATGACACAGAAAGCCTTAAGTATCCATTTGGACATGAAGTTAACACAGT 2520
Db 2580 GATTAATAGAAATGACACAGAAAGCCTTAAGTATCCATTTGGACATGAAGTTAACACAGT 2639
QY 2521 CGGGAACAGCATGGAATGGAAGAAAGTGAAGTACTGCTCAGTATTTTCCAGATPACA 2580
Db 2640 CGGGAACAGCATGGAATGGAAGAAAGTGAAGTACTGCTCAGTATTTTCCAGATPACA 2699
QY 2581 TTCAAGGTTTCAAAAGCCGAGTCAATTTCTGTTTCAATTCAGGAAATGCGAAGAG 2640
Db 2700 TTCAAGGTTTCAAAAGCCGAGTCAATTTCTGTTTCAATTCAGGAAATGCGAAGAG 2759
QY 2641 GAATGTGCAACATTTCTGCCACTCTGGGTCTTTAAAGAAAAGTCCAAAAGTCACT 2700
Db 2760 GAATGTGCAACATTTCTGCCACTCTGGGTCTTTAAAGAAAAGTCCAAAAGTCACT 2819
QY 2701 TTTGAATGTGAACAAAAGAAAAGAAAATPACAGAAAAGATGCTAATATTCAGCCCTGTA 2760
Db 2820 TTTGAATGTGAACAAAAGAAAAGAAAATPACAGAAAAGATGCTAATATTCAGCCCTGTA 2879
QY 2761 CAGACAGTTAATATCAGTCAAGGCTTCTGTTGTTGTCAGAAAAGATTAAGCCAGTTGAT 2820
Db 2880 CAGACAGTTAATATCAGTCAAGGCTTCTGTTGTTGTCAGAAAAGATTAAGCCAGTTGAT 2939
QY 2821 AATGCCAAATGATATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGC 2880
Db 2940 AATGCCAAATGATATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTTCCAGAGC 2999
QY 2881 AACGAAATCGACATATTTACCTCAAAATTAACATGACCTTTTACAAAACCATATGCTATA 2940
Db 3000 AACGAAATCGACATATTTACCTCAAAATTAACATGACCTTTTACAAAACCATATGCTATA 3059
QY 2941 CCACCACTTTTCCCATCAAGTCAATTTTGTAAATCAATATAGAAAATCTGCTAGAG 3000
Db 3060 CCACCACTTTTCCCATCAAGTCAATTTTGTAAATCAATATAGAAAATCTGCTAGAG 3119
QY 3001 GAAAACCTTTGAGGAACATTCATGTCACCTGAAAAGAGAAATGGAATGAGAACATTCGA 3060
Db 3120 GAAAACCTTTGAGGAACATTCATGTCACCTGAAAAGAGAAATGGAATGAGAACATTCGA 3179
QY 3061 AGTACAGTACACAAATTAAGCCGTAATTAACATTAAGAAAATGTTTTTAAAGAACGAGC 3120
Db 3180 AGTACAGTACACAAATTAAGCCGTAATTAACATTAAGAAAATGTTTTTAAAGAACGAGC 3239
QY 3121 TCAGCAATTAATTAAGAGTAGTTCAGTACTAATGAAGTGGGCTCCAGTATTAATGAA 3180
Db 3240 TCAGCAATTAATTAAGAGTAGTTCAGTACTAATGAAGTGGGCTCCAGTATTAATGAA 3299
QY 3181 ATAGGTTCCAGTATGAAGAACATTCAGACAGACTAGTAGAAGAGGCCCAAAATTTG 3240
Db 3300 ATAGGTTCCAGTATGAAGAACATTCAGACAGACTAGTAGAAGAGGCCCAAAATTTG 3359
QY 3241 AATGCTATGCTTAAGTTAGGGGTTTTGCAACCTAGGCTTAATGAACAACTTCCGSGA 3300
Db 3360 AATGCTATGCTTAAGTTAGGGGTTTTGCAACCTAGGCTTAATGAACAACTTCCGSGA 3419
QY 3301 AGTAAATTTAAGCAATCCGTAATTAAGAAAAGCAAAATATGAAGAGTACTGACAGCTGT 3360
Db 3420 AGTAAATTTAAGCAATCCGTAATTAAGAAAAGCAAAATATGAAGAGTACTGACAGCTGT 3479
QY 3361 AATACAGATTTTCTCCATATCTGATATTCAGATTAACATTAAGAACGCTATGGAAGTATG 3420
Db 3480 AATACAGATTTTCTCCATATCTGATATTCAGATTAACATTAAGAACGCTATGGAAGTATG 3539
QY 3421 CATGATCTCAGGTTTGTGTTGAGACACCTGATACCTGTTAGATGATGTTGAATTAAG 3480
Db 3540 CATGATCTCAGGTTTGTGTTGAGACACCTGATACCTGTTAGATGATGTTGAATTAAG 3599
QY 3481 GAAGATACATGTTTGTGTTGAGAAATGACATTAAGAAAAGTCTGCTGTTTATACAAAAGC 3540
Db 3600 GAAGATACATGTTTGTGTTGAGAAATGACATTAAGAAAAGTCTGCTGTTTATACAAAAGC 3659

```

QY 3541 GTCCAGAAAGAGAGCTTACAGAGTCTAGCCCTTTCACCCATACATCATTTGGCTCAG 3600
    |||||
Db 3660 GTCCAGAAAGAGAGCTTACAGAGTCTAGCCCTTTCACCCATACATCATTTGGCTCAG 3719
QY 3601 GGTTCAGGAAGAGGGGCCAAGAAATTAAGTCTCTCAGAGAGAACTTATCTAGAGAT 3660
    |||||
Db 3720 GGTTCAGGAAGAGGGGCCAAGAAATTAAGTCTCTCAGAGAGAACTTATCTAGAGAT 3779
QY 3661 GAAGAGTCTCCGCTCCCAACACTGTCTTTTGGTAAATTAACATATACCTCTCAG 3720
    |||||
Db 3780 GAAGAGTCTCCGCTCCCAACACTGTCTTTTGGTAAATTAACATATACCTCTCTCAG 3839
QY 3721 TCTACTAGCATAGACCGCTTGTCTACCGATGTCTGTCTAAGAACAGAGAGAAATTTA 3780
    |||||
Db 3840 TCTACTAGCATAGACCGCTTGTCTACCGATGTCTGTCTAAGAACAGAGAGAAATTTA 3839
QY 3781 TTATCATTTGAAGAAATAGCTTTAAATGACTGCAATACCAAGTAAATATTGGCAAGCATCT 3840
    |||||
Db 3900 TTATCATTTGAAGAAATAGCTTTAAATGACTGCAATACCAAGTAAATATTGGCAAGCATCT 3959
QY 3841 CAGGAACATCACCTTAGTGTGAGAAACAAATGTCTGCTAGCTTGTCTTCTCAGAGTGC 3900
    |||||
Db 3960 CAGGAACATCACCTTAGTGTGAGAAACAAATGTCTGCTAGCTTGTCTTCTCAGAGTGC 4019
QY 3901 AGTGAATTGGAAGACTTGAAGTCAATACAAACACCCAGATCCTTCTTGATGTGCTCT 3960
    |||||
Db 4020 AGTGAATTGGAAGACTTGAAGTCAATACAAACACCCAGATCCTTCTTGATGTGCTCT 4079
QY 3961 TCCAAACAAATGAGGCTCAAGTCTGAAAGCCAGAGAGTGGTCTGAGTCAAGAAATTG 4020
    |||||
Db 4080 TCCAAACAAATGAGGCTCAAGTCTGAAAGCCAGAGAGTGGTCTGAGTCAAGAAATTG 4139
QY 4021 GTTTCAGATGATGAAGAAAGAGAGAGGCGCTTGAAGAAATTAATCAAGAAAGCAAGC 4080
    |||||
Db 4140 GTTTCAGATGATGAAGAAAGAGAGAGGCGCTTGAAGAAATTAATCAAGAAAGCAAGC 4199
QY 4081 ATGGAATTCAACTTAGTGAAGCAGCATCTGGGTGTGAGAGTGAAGAAACAGCTCTCTGAA 4140
    |||||
Db 4200 ATGGAATTCAACTTAGTGAAGCAGCATCTGGGTGTGAGAGTGAAGAAACAGCTCTCTGAA 4259
QY 4141 GACTGCTCAGGGCTATCTCTCTCAGAGTGAATTTTAAACACTCAGCAGAGAGATACCAGT 4200
    |||||
Db 4260 GACTGCTCAGGGCTATCTCTCTCAGAGTGAATTTTAAACACTCAGCAGAGAGATACCAGT 4319
QY 4201 CAACATTAACCTGATTAAGGCTCCAGAGAAATGGCTGAAGTACTAGAGTGTGTAGAAACAG 4260
    |||||
Db 4320 CAACATTAACCTGATTAAGGCTCCAGAGAAATGGCTGAAGTACTAGAGTGTGTAGAAACAG 4379
QY 4261 CATGGAGCCAGCCTTCTTAACAGCTACCTTCCATCATTAAGTACTTCTGCCCCTTGAG 4320
    |||||
Db 4380 CATGGAGCCAGCCTTCTTAACAGCTACCTTCCATCATTAAGTACTTCTGCCCCTTGAG 4439
QY 4321 GACTCGGAAATTCAGAAACAAACACATCAGAAAAAGCAGTAACTTCTCAGAGAAAGT 4380
    |||||
Db 4440 GACTCGGAAATTCAGAAACAAACACATCAGAAAAAGCAGTAACTTCTCAGAGAAAGT 4499
QY 4381 AGTGAATTAACCTTAAGGCTCAGATCCAGAGAGCCTTCTGCTGACAGAGTTGGAGTGTCT 4440
    |||||
Db 4500 AGTGAATTAACCTTAAGGCTCAGATCCAGAGAGCCTTCTGCTGACAGAGTTGGAGTGTCT 4559
QY 4441 GCAGATAGTTCTACAGTAAATAAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAAA 4500
    |||||
Db 4560 GCAGATAGTTCTACAGTAAATAAAGAACAGAGAGTGAAGAGTCAATCCCTCTTAAA 4619
QY 4501 TGCCCATCATTAATGATAGTGTGATCAGAGTGGTCTCTGGAGTCTTCAAGATAGA 4560
    |||||
Db 4620 TGCCCATCATTAATGATAGTGTGATCAGAGTGGTCTCTGGAGTCTTCAAGATAGA 4679
QY 4561 AACTACCATCTCAAGAGAGCTCATTAAGGTTGGATGTGAGAGCAACAGCTGGAA 4620
    |||||
Db 4680 AACTACCATCTCAAGAGAGCTCATTAAGGTTGGATGTGAGAGCAACAGCTGGAA 4739
QY 4621 GAGTCTGGGCGACAGATTTGACGGAACATCTTACTTGCAGGCAAGATCTAGAGGA 4680

```

```

Db 4740 GAGTCTGGGCGACAGATTTGAGGAAACATCTTACTTGGCAAGCAAGATCTAGAGGA 4799
QY 4681 ACCCTTACTGGAATGTGAAATCAGCTCTTCTCTATGACCTGTAATCTGATCTTCT 4740
    |||||
Db 4800 ACCCTTACTGGAATGTGAAATCAGCTCTTCTCTATGACCTGTAATCTGATCTTCT 4859
QY 4741 GAAGACAGAGCCCGAGTCAAGTCCGTTGGCAACATACCATCTTAACCTCTGCAATG 4800
    |||||
Db 4860 GAAGACAGAGCCCGAGTCAAGTCCGTTGGCAACATACCATCTTAACCTCTGCAATG 4919
QY 4801 AAAGTCCCAATTAAGAGTTGCAAGATCTGCCAGAGTCCAGTCTGCTATCTACT 4860
    |||||
Db 4920 AAAGTCCCAATTAAGAGTTGCAAGATCTGCCAGAGTCCAGTCTGCTATCTACT 4979
QY 4861 GATACGCTGGGTAAATGCAATGGAAGAAAGTGTGAGCAGAGGAGAAACCAAGAAATGACA 4920
    |||||
Db 4980 GATACGCTGGGTAAATGCAATGGAAGAAAGTGTGAGCAGAGGAGAAACCAAGAAATGACA 5039
QY 4921 GCTTCACAGAAAGGGTCAACAAAGAAATGCCATGGTGGTCTGGCTGACCCCGAA 4980
    |||||
Db 5040 GCTTCACAGAAAGGGTCAACAAAGAAATGCCATGGTGGTCTGGCTGACCCCGAA 5099
QY 4981 GAAATTAATGCTGTGACAAAGTTGCGAGAAACACCAATCACTTAATCTAAT 5040
    |||||
Db 5100 GAAATTAATGCTGTGACAAAGTTGCGAGAAACACCAATCACTTAATCTAAT 5159
QY 5041 ACTGAAGAGACTACTCATGTTGTTATGAAACAGATCTGAGTTGTGTGTGAACGACA 5100
    |||||
Db 5160 ACTGAAGAGACTACTCATGTTGTTATGAAACAGATCTGAGTTGTGTGTGAACGACA 5219
QY 5101 CTGAATTAATTTCTAGGAATTTGCGGAGAGAAATGGTACTGATCTTCTGGGTGACC 5160
    |||||
Db 5220 CTGAATTAATTTCTAGGAATTTGCGGAGAGAAATGGTACTGATCTTCTGGGTGACC 5279
QY 5161 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATATTTTGAAGTCAAGAGAGATGTG 5220
    |||||
Db 5280 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATATTTTGAAGTCAAGAGAGATGTG 5339
QY 5221 GTCAATGGAAGAAACCAACAGGTCCAAAGCGAGCAAGAAATCCAGAGCAAGAGATC 5280
    |||||
Db 5340 GTCAATGGAAGAAACCAACAGGTCCAAAGCGAGCAAGAAATCCAGAGCAAGAGATC 5399
QY 5281 TTCAGGGGGCTAGAAATCTGTCTATGGGCCCTTCCAAACATGCCACAGATCAACTG 5340
    |||||
Db 5400 TTCAGGGGGCTAGAAATCTGTCTATGGGCCCTTCCAAACATGCCACAGATCAACTG 5459
QY 5341 GAATGATGTAGAGCTGTGTGCTTCTGTGTGTAAGAGGCTTTCATCTACCCCTT 5400
    |||||
Db 5460 GAATGATGTAGAGCTGTGTGCTTCTGTGTGTAAGAGGCTTTCATCTACCCCTT 5519
QY 5401 GGCACAGAGTCCACCAATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5460
    |||||
Db 5520 GGCACAGAGTCCACCAATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5579
QY 5461 TTCATGCAATTTGGGCGAGATGTGTGAGAGCACTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5520
    |||||
Db 5580 TTCATGCAATTTGGGCGAGATGTGTGAGAGCACTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5639
QY 5521 AGTGTAGACTCTACAGTGTGAGAGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5580
    |||||
Db 5640 AGTGTAGACTCTACAGTGTGAGAGAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5699
QY 5581 AGCCACTAC 5589
    |||||
Db 5700 AGCCACTAC 5708

```

RESULT 11
 US-08-487-002-1
 ; Sequence 1, Application US/08487002
 ; Patent No. 5710001
 ; GENERAL INFORMATION:

```

? APPLICANT: Shattuck-Eldens, Donna M.
? APPLICANT: Simard, Jacques
? APPLICANT: Eml, Mitsuru
? APPLICANT: Nakamura, Yusuke
? APPLICANT: Durocher, Francine
? TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
? NUMBER OF SEQUENCES: 85
? TITLE OF INVENTION: Susceptibility Gene
? CORRESPONDENCE ADDRESS:
? ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
? STREET: 1201 New York Avenue, N.W., Suite 1000
? CITY: Washington
? STATE: DC
? COUNTRY: USA
? ZIP: 20005
? COMPUTER READABLE FORM:
? MEDIUM TYPE: Floppy disk
? COMPUTER: IBM PC compatible
? OPERATING SYSTEM: PC-DOS/MS-DOS
? SOFTWARE: PatentIn Release #1.0, Version #1.30
? CURRENT APPLICATION DATA:
? APPLICATION NUMBER: US/08/487,002
? FILING DATE:
? CLASSIFICATION: 424
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/409,305
? FILING DATE: 24-MAR-1995
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/348,824
? FILING DATE: 29-NOV-1994
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/308,104
? FILING DATE: 16-SEP-1994
? PRIOR APPLICATION DATA:
? APPLICATION NUMBER: US 08/300,266
? FILING DATE: 02-SEP-1994
? APPLICATION DATA:
? APPLICATION NUMBER: US 08/289,221
? FILING DATE: 12-AUG-1994
? ATTORNEY/AGENT INFORMATION:
? NAME: Ihnen, Jeffrey L.
? REGISTRATION NUMBER: 28,957
? REFERENCE/DOCKET NUMBER: 24884-109347
? TELECOMMUNICATION INFORMATION:
? TELEPHONE: 202-962-4810
? TELEFAX: 202-962-8300
? INFORMATION FOR SEQ ID NO: 1:
? SEQUENCE CHARACTERISTICS:
? LENGTH: 5914 base pairs
? TYPE: nucleic acid
? STRANDEDNESS: double
? TOPOLOGY: linear
? MOLECULE TYPE: cDNA
? HYPOTHETICAL: NO
? ANTI-SENSE: NO
? ORIGINAL SOURCE:
? ORGANISM: Homo sapiens
? FEATURE:
? NAME/KEY: CDS
? LOCATION: 120..5711
? US-08-487-002-1

```

```

Query Match      99.9%; Score 5585.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

```

```

QY 1 ATGGATTATCTCTCTTCCGCTTGAAGAGTACAAATGTCATTAATGCTATGACAGAAA 60
DB 120 ATGGATTATCTCTCTTCCGCTTGAAGAGTACAAATGTCATTAATGCTATGACAGAAA 179
QY 61 ATCTTAGAGTGTCCATCTGTGTGAGATTGATCAAGGACCTGCTCCAAAGTGTGAC 120
DB 180 ATCTTAGAGTGTCCATCTGTGTGAGATTGATCAAGGACCTGCTCCAAAGTGTGAC 239

```

```

QY 121 CACATATTTTGCAAATTTTGCATGCGAAACTTCTCAACCGAAGAAAGGCCCTTCCACAG 180
DB 240 CACATATTTTGCAAATTTTGCATGCGAAACTTCTCAACCGAAGAAAGGCCCTTCCACAG 299
QY 181 TGTCTTATGTAAGTAATGATATACCAAAAGAGCCCTACAGAAAGTACGAGATTAGT 240
DB 300 TGTCTTATGTAAGTAATGATATACCAAAAGAGCCCTACAGAAAGTACGAGATTAGT 359
QY 241 CAACCTGTGAAAGCATATGAAATATGCTTGTGCTTTCAGCTTACACAGATTGAG 300
DB 360 CAACCTGTGAAAGCATATGAAATATGCTTGTGCTTTCAGCTTACACAGATTGAG 419
QY 301 TATGCAAAACAGCTATTAATTTTGCAAAAAGAAATTAATCTTCCAGACATTAAGAT 360
DB 420 TATGCAAAACAGCTATTAATTTTGCAAAAAGAAATTAATCTTCCAGACATTAAGAT 479
QY 361 GAAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTCCAAAGACTTCTACAGAT 420
DB 480 GAAGTTTCTATCATCCAAAGTATGGGCTACAGAAACCGTCCAAAGACTTCTACAGAT 539
QY 421 GAACCGGAAATCCTTCTGCAAGAAACAGTCTCAGTGTCCACTCTTAACCTTGA 480
DB 540 GAACCGGAAATCCTTCTGCAAGAAACAGTCTCAGTGTCCACTCTTAACCTTGA 599
QY 481 ACTGTGAAACTCTGAGACAAAGCAGCGGATCAACCTCAAAAGAGCTGTCTACAT 540
DB 600 ACTGTGAAACTCTGAGACAAAGCAGCGGATCAACCTCAAAAGAGCTGTCTACAT 659
QY 541 GAATGGGATCTGATTTCTGTGAAGATACCCTTAATTAAGGCACTTATTCAGTGTGGA 600
DB 660 GAATGGGATCTGATTTCTGTGAAGATACCCTTAATTAAGGCACTTATTCAGTGTGGA 719
QY 601 GATCAAGATTTTACAAATCACCCCTCAAGAAACAGGATGAATTCAGTTGATTC 660
DB 720 GATCAAGATTTTACAAATCACCCCTCAAGAAACAGGATGAATTCAGTTGATTC 779
QY 661 GCAAAAAAGGCTGCTGTGAATTTTCTGAGACGATGTAAACAATCTGAATCATCAA 720
DB 780 GCAAAAAAGGCTGCTGTGAATTTTCTGAGACGATGTAAACAATCTGAATCATCAA 839
QY 721 CCCAGTAATTAATTTTGAACACACGACGAGAACCGTGTGAGAGGATCCAGAAAG 780
DB 840 CCCAGTAATTAATTTTGAACACACGACGAGAACCGTGTGAGAGGATCCAGAAAG 899
QY 781 TATCAGGGATGTTCTGTTTCAAACTTCATGTGAGACCATGTGGCAAAATCTCATGCC 840
DB 900 TATCAGGGATGTTCTGTTTCAAACTTCATGTGAGACCATGTGGCAAAATCTCATGCC 959
QY 841 AGCTCATTAAGATGAAACAGCAGTTTATTACTCACTAAGACAGAAATGAATGAGAA 900
DB 960 AGCTCATTAAGATGAAACAGCAGTTTATTACTCACTAAGACAGAAATGAATGAGAA 1019
QY 901 AAGGCTGAATTCGTATTAAGCAAAAGCCGTGGCTTGAAGAGGCCAATATACGA 960
DB 1020 AAGGCTGAATTCGTATTAAGCAAAAGCCGTGGCTTGAAGAGGCCAATATACGA 1079
QY 961 TGGGCTGGAAGTAAAGCAATATGATAGGCGGACTCCAGACAGAAAAAAGGTA 1020
DB 1080 TGGGCTGGAAGTAAAGCAATATGATAGGCGGACTCCAGACAGAAAAAAGGTA 1139
QY 1021 GATCTGAATGCTATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAAAACTGCCATGC 1080
DB 1140 GATCTGAATGCTATCCCTGTGTGAGAGAAAAAGATGAATTAAGCAAAACTGCCATGC 1199
QY 1081 TCAGAGAACTCTAGATTAAGTGAAGATGTTCTGTGATTAACCTAAATAGCAGCTTACG 1140
DB 1200 TCAGAGAACTCTAGATTAAGTGAAGATGTTCTGTGATTAACCTAAATAGCAGCTTACG 1259
QY 1141 AAGTTAATAGTGTGTTTCCAGAAAGTGAATGAATTTAGTTGATTCAGATCAATGAT 1200
DB 1260 AAGTTAATAGTGTGTTTCCAGAAAGTGAATGAATTTAGTTGATTCAGATCAATGAT 1319

```


1201 GGGAGTCTGATCAATCCAAAGTAGCTGATGATTGACGTTCTTAATGAGTAGAT 1260
|||||
1320 GGGGCTGATCAATCAAAAGTAGCTGATGATTGACGTTCTTAATGAGTAGAT 1379
|||||
1261 GAATTTCTGTTCTTACAGAAAATAGACTTACTGCCAGTGTCTCATGAGGCTTTA 1320
|||||
1380 GAATTTCTGTTCTTACAGAAAATAGACTTACTGCCAGTGTCTCATGAGGCTTTA 1439
|||||
1321 ATATGTAAGTGAAGAGTCTACCTCCAAATCAGTAGAGTAAATATGAGACAAAATA 1380
|||||
1440 ATATGTAAGTGAAGAGTCTACCTCCAAATCAGTAGAGTAAATATGAGACAAAATA 1499
|||||
1381 TTGGGAAAACCTATCGGAGAGGCAAGCCCTCCCACTTACGCACTGTAAGTAAAT 1440
|||||
1500 TTGGGAAAACCTATCGGAGAGGCAAGCCCTCCCACTTACGCACTGTAAGTAAAT 1559
|||||
1441 CTAATATAGAGAGATTTGTTACTGAGGACACAGATTAATCAAGAGCGTCCCTCAAAAT 1500
|||||
1560 CTAATATAGAGAGATTTGTTACTGAGGACACAGATTAATCAAGAGCGTCCCTCAAAAT 1619
|||||
1501 AAATTAAGCGTTAAAGAGAGACTACATCAGGCGCTTCTGAGAGATTTTATCAAGAAA 1560
|||||
1620 AAATTAAGCGTTAAAGAGAGACTACATCAGGCGCTTCTGAGAGATTTTATCAAGAAA 1679
|||||
1561 GCAGATTTGGCAGTTCAAAAGAGCTCTGAAAATGATTAATCAGGAACTAACCAACGAG 1620
|||||
1680 GCAGATTTGGCAGTTCAAAAGAGCTCTGAAAATGATTAATCAGGAACTAACCAACGAG 1739
|||||
1621 CAGAGTGTCAAGTGAATATTTACTATATAGTGTCTATGGAATTAACAAAGGCTAT 1680
|||||
1740 CAGAGTGTCAAGTGAATATTTACTATATAGTGTCTATGGAATTAACAAAGGCTAT 1799
|||||
1681 TCTATTCGATGAGAAAATCTTACCCATAGATATCTGAAAAGATTCGCTTTC 1740
|||||
1800 TCTATTCGATGAGAAAATCTTACCCATAGATATCTGAAAAGATTCGCTTTC 1859
|||||
1741 AAAAGAAAGCTGAACCTATTAAGCAGCAGTAAATGATTAATGAACTGAAATATC 1800
|||||
1860 AAAAGAAAGCTGAACCTATTAAGCAGCAGTAAATGATTAATGAACTGAAATATC 1919
|||||
1801 CACATTTCAAAAGCCTTAAAGAAATAGGCTGAGGAGAACTTCTTACAGCAGATTT 1860
|||||
1920 CACATTTCAAAAGCCTTAAAGAAATAGGCTGAGGAGAACTTCTTACAGCAGATTT 1979
|||||
1861 CATAGCGTTGAAGTATGATGATGAGAAATCTAAGCCACCTAATTTGACTGAAATTTG 1920
|||||
1980 CATAGCGTTGAAGTATGATGATGAGAAATCTAAGCCACCTAATTTGACTGAAATTTG 2039
|||||
1921 ATGATAGTGTCTTACAGAGTGAAGATTAAGAAAAGAAAGTAAACCAATGCCAGTC 1980
|||||
2040 ATGATAGTGTCTTACAGAGTGAAGATTAAGAAAAGAAAGTAAACCAATGCCAGTC 2039
|||||
1981 AGGACAGCAGAAACCTTACAACTCATGGAAGTAAAGAACTGCACTGAGGCCAAGAG 2040
|||||
2100 AGGACAGCAGAAACCTTACAACTCATGGAAGTAAAGAACTGCACTGAGGCCAAGAG 2159
|||||
2041 AGTAAACAGCAATGAAGACAGAAAGTAAAGACATGACAGTACTTTCCAGAGGTG 2100
|||||
2160 AGTAAACAGCAATGAAGACAGAAAGTAAAGACATGACAGTACTTTCCAGAGGTG 2219
|||||
2101 AAGTAAACAAATGACAGCTGTTCTTTTACTAAGTGTCAATTAACAGTAACTTAAGAA 2160
|||||
2220 AAGTAAACAAATGACAGCTGTTCTTTTACTAAGTGTCAATTAACAGTAACTTAAGAA 2279
|||||
2161 TTTTGTCAATCTACCTTCCAGAGAAAGAAAGAAAGAACTAGAAACAGTTAAAGTG 2220
|||||
2280 TTTTGTCAATCTACCTTCCAGAGAAAGAAAGAAAGAACTAGAAACAGTTAAAGTG 2339
|||||
2221 TCTATATATGCTGAAGAGCCCAAGATCTCATTTAAGTGAAGAGGCTTTTCAAACT 2280
|||||
2340 TCTATATATGCTGAAGAGCCCAAGATCTCATTTAAGTGAAGAGGCTTTTCAAACT 2399
|||||
2281 GAAAGATCTGTAGAGAGTACGATTTTCATTTGTTACTGATTAATGAGCACTAG 2340
|||||

2400 GAAAGATCTGTAGAGAGTAGAGATTTTCATTTGTTACTGTTACTGATTAATGAGCACTAG 2459
|||||
2341 GAAAGATCTGTGTACTGGAAGTTAGACCTTAGGGAAGGCAAAACCAATTAATA 2400
|||||
2460 GAAAGATCTGTGTACTGGAAGTTAGACCTTAGGGAAGGCAAAACCAATTAATA 2519
|||||
2401 TGTGTGATCTAGTGTGCGAGCTTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAA 2460
|||||
2520 TGTGTGATCTAGTGTGCGAGCTTTGAAAACCCCAAGGAGCTAATTCATGTTGTTCCAAA 2579
|||||
2461 GATATAGAAATGACACAGAAAGGCTTTAAGTATCCATTTGGACATGAAGTTAACACAGT 2520
|||||
2580 GATATAGAAATGACACAGAAAGGCTTTAAGTATCCATTTGGACATGAAGTTAACACAGT 2639
|||||
2521 CGGGAACACACATAGAAATGGAAGAAAGTACTGTACTGCTCAATTTTGCAGAAATCA 2580
|||||
2640 CGGGAACACACATAGAAATGGAAGAAAGTACTGTACTGCTCAATTTTGCAGAAATCA 2699
|||||
2581 TTCAAGGTTTCAAGCGCCAGCTCATTTGCTGTTTCAATTCAGAAATGAGAAAGAG 2640
|||||
2700 TTCAAGGTTTCAAGCGCCAGCTCATTTGCTGTTTCAATTCAGAAATGAGAAAGAG 2759
|||||
2641 GAATGTGCACATTTCTGCCCACCTGTGGTCTTTAAGAAACAAAGTCCAAAGTCACT 2700
|||||
2760 GAATGTGCACATTTCTGCCCACCTGTGGTCTTTAAGAAACAAAGTCCAAAGTCACT 2819
|||||
2701 TTTGAATGTGAACAAAGAGAAATTCAGAAAGAAATGAGTCTAATATACAGCTCTTA 2760
|||||
2820 TTTGAATGTGAACAAAGAGAAATTCAGAAAGAAATGAGTCTAATATACAGCTCTTA 2879
|||||
2761 CAGACAGTATATACAGCTGAGGCTTCTGTTGTTGTCAGAAAGATTAACAGTGTAT 2820
|||||
2880 CAGACAGTATATACAGCTGAGGCTTCTGTTGTTGTCAGAAAGATTAACAGTGTAT 2939
|||||
2821 AATGCCAAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTACAGAGC 2880
|||||
2940 AATGCCAAATGTAGATCAAAAGAGGCTCTAGGTTTGTCTATCATCTCAGTACAGAGC 2999
|||||
2881 AAGCAAACTGACATCTTACCTCAATTAACATGAGCTTTTACAAACCCATATCTATA 2940
|||||
3000 AAGCAAACTGACATCTTACCTCAATTAACATGAGCTTTTACAAACCCATATCTATA 3059
|||||
2941 CCACACCTTTTCCATCAATGATCTTTGTTTAACTAATGTAAGAAAATCTGCTAGAG 3000
|||||
3060 CCACACCTTTTCCATCAATGATCTTTGTTTAACTAATGTAAGAAAATCTGCTAGAG 3119
|||||
3001 GAAAACTTTGAGGAACATTTCAATGTCACTGAGAAAGAAATGGAAATGAGAACATTTCA 3060
|||||
3120 GAAAACTTTGAGGAACATTTCAATGTCACTGAGAAAGAAATGGAAATGAGAACATTTCA 3179
|||||
3061 AGTACAGTGAACACAAATTTAGCCGTAATTAACCTTAGAGAAATGTTTAAAGAACCCAGC 3120
|||||
3180 AGTACAGTGAACACAAATTTAGCCGTAATTAACCTTAGAGAAATGTTTAAAGAACCCAGC 3239
|||||
3121 TCAAGCAATTTAATGAAGTGTGCTCAGTAAATGAAGGCGCTCAGTATTAATGA 3180
|||||
3240 TCAAGCAATTTAATGAAGTGTGCTCAGTAAATGAAGGCGCTCAGTATTAATGA 3299
|||||
3181 ATAGGTTCCAGTGTGAAGAAACATTCAGACAGAACTAGTAGAAACAGAGGCCCAAAATG 3240
|||||
3300 ATAGGTTCCAGTGTGAAGAAACATTCAGACAGAACTAGTAGAAACAGAGGCCCAAAATG 3359
|||||
3241 AATGCTATGCTTAATTAAGGAGTTTGTCAACCTGAGGCTTATTAACAAAGTCTTCTGGA 3300
|||||
3360 AATGCTATGCTTAATTAAGGAGTTTGTCAACCTGAGGCTTATTAACAAAGTCTTCTGGA 3419
|||||
3301 AGTAAATGTAAAGTCTGAAATTAAGAAAGCAAGATATGAAGAGTGTGCTCAGAGCTT 3360
|||||
3420 AGTAAATGTAAAGTCTGAAATTAAGAAAGCAAGATATGAAGAGTGTGCTCAGAGCTT 3479
|||||
3361 AATACAGATTTCTTCCATATCTGATTTACAGTAACTAGAAACGCTATGGAAGTAGT 3420
|||||

Db	3480	AATACAGATTCTCTCATATCTGATTTTCAGATACTTAGAACAGCCTTAGGAGTACT	3539
QY	3421	CATGATCTCAGGTTTGTTCGAGACACCTGATGACCTGTAGATGATGGTAATTAAG	3480
Db	3540	CATGATCTCAGGTTTGTTCGAGACACCTGATGACCTGTAGATGATGGTAATTAAG	3599
QY	3481	GAAGATCTAGTTTGTGTAATAATGACATTAAGAAAGTTCTGCTTTTTCAGAAAGC	3540
Db	3600	GAAGATCTAGTTTGTGTAATAATGACATTAAGAAAGTTCTGCTTTTTCAGAAAGC	3659
QY	3541	GTCGAGAAAGAGAGACTTAGCAGAGAGCTCCTAGCCCTTACCCATACATTTGGCTAG	3600
Db	3660	GTCGAGAAAGAGAGACTTAGCAGAGAGCTCCTAGCCCTTACCCATACATTTGGCTAG	3719
QY	3601	GTTTACCGAAGAGAGGCGCAAGAAATTAGAGTCTCAGAAAGAGACTTATCTAGTAGAT	3660
Db	3720	GTTTACCGAAGAGAGGCGCAAGAAATTAGAGTCTCAGAAAGAGACTTATCTAGTAGAT	3779
QY	3661	GAAGAGCTTCCCTGCTCCAAACACTTGTATTTGTAAAGTAAGACATATACCTTCTAG	3720
Db	3780	GAAGAGCTTCCCTGCTCCAAACACTTGTATTTGTAAAGTAAGACATATACCTTCTAG	3839
QY	3721	TCTACTAGGAGTAGAGCGGTGTCTACGAGGTGTCTGTAAGACAGAGAGAAATTA	3780
Db	3840	TCTACTAGGAGTAGAGCGGTGTCTACGAGGTGTCTGTAAGACAGAGAGAAATTA	3899
QY	3781	TTATCATTAAGAAATAGCTTAATATGACTGACAGTAACAGTAATATTTGGCAAGCATCT	3840
Db	3900	TTATCATTAAGAAATAGCTTAATATGACTGACAGTAACAGTAATATTTGGCAAGCATCT	3959
QY	3841	CAGAACATCACTTATAGTGAAGAAACAAATGTCTGCTAGCTTTTCTTCAACAGTCC	3900
Db	3960	CAGAACATCACTTATAGTGAAGAAACAAATGTCTGCTAGCTTTTCTTCAACAGTCC	4019
QY	3901	AGTAATTTGGAAGACTGACTGCAATATCAAAACACCCAGAGACTTTCTGATGGTCT	3960
Db	4020	AGTAATTTGGAAGACTGACTGCAATATCAAAACACCCAGAGACTTTCTGATGGTCT	4079
QY	3961	TCCAAACAAATGAGGCATCAGTCTGAAAGCCAGGAGTTGGTCTGAGTACAGAAATTG	4020
Db	4080	TCCAAACAAATGAGGCATCAGTCTGAAAGCCAGGAGTTGGTCTGAGTACAGAAATTG	4139
QY	4021	GTTTCAAGTATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAGC	4080
Db	4140	GTTTCAAGTATGAAGAAAGAGAAACGGGCTTGGAAAGAAATATCAAGAGAGCAAGC	4199
QY	4081	ATGATTTCAAACTTAGTGAAGACAGCATCTGGGTGTGAGAGTGAACAAGCCTCTGAA	4140
Db	4200	ATGATTTCAAACTTAGTGAAGACAGCATCTGGGTGTGAGAGTGAACAAGCCTCTGAA	4259
QY	4141	GACTGCTCAGGGCTATCTCTCAGAGTACATTTTAAACACTCAGCAGAGGATACATG	4200
Db	4260	GACTGCTCAGGGCTATCTCTCAGAGTACATTTTAAACACTCAGCAGAGGATACATG	4319
QY	4201	CAATATTAACCTGATAAAGCTCCAGCAGAAATGGGTGAACCTAGAGCTGTATAACAG	4260
Db	4320	CAATATTAACCTGATAAAGCTCCAGCAGAAATGGGTGAACCTAGAGCTGTATAACAG	4379
QY	4261	CATGGAGAGCAGCCTTCTAACAGTACCTTCCATCATTAAGTACTTCTCCCTTGAG	4320
Db	4380	CATGGAGAGCAGCCTTCTAACAGTACCTTCCATCATTAAGTACTTCTCCCTTGAG	4439
QY	4321	GACCTGGGAAATTCAGAAACAAAGCAGATCAAAAAAGCAGTATTAATTCACAGAAAGT	4380
Db	4440	GACCTGGGAAATTCAGAAACAAAGCAGATCAAAAAAGCAGTATTAATTCACAGAAAGT	4499
QY	4381	AGTAATAACCTTATTAAGCCAGAAATTCAGAAAGCCTTCTGCTGACAAATTTGAGTGTCT	4440
Db	4500	AGTAATAACCTTATTAAGCCAGAAATTCAGAAAGCCTTCTGCTGACAAATTTGAGTGTCT	4559
QY	4441	GCAGATAGTTCTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTAAA	4500
Db	4560	GCAGATAGTTCTTACAGTAAATTAAGAACAGAGAGTGAAGAGTCAATCCCTCTAAA	4619

QY	4501	TGCCCATCATTTAGATAGTAGGTTGATACAGATGCTCTGGGAGTCTCAGAAATGA	4560
Db	4620	TGCCCATCATTTAGATAGTAGGTTGATACAGATGCTCTGGGAGTCTCAGAAATGA	4679
QY	4561	AACTACCATCTCAAGAGAGAGCTCAATTAAGTTGTGTGATGTGAGAGCAACAGCTGGAA	4620
Db	4680	AACTACCATCTCAAGAGAGAGCTCAATTAAGTTGTGTGATGTGAGAGCAACAGCTGGAA	4739
QY	4621	GAGTCTGGCCACACAGATTTGACGGAACATCTTACTTGTCCCAAGCAAGATCTAGAGGA	4680
Db	4740	GAGTCTGGCCACACAGATTTGACGGAACATCTTACTTGTCCCAAGCAAGATCTAGAGGA	4799
QY	4681	ACCCCTTACCTGGAATCTGGAATCAGCTCTCTCTGTGATGACCTGATCTGATCTCT	4740
Db	4800	ACCCCTTACCTGGAATCTGGAATCAGCTCTCTCTGTGATGACCTGATCTGATCTCT	4859
QY	4741	GAAGACAGACCCCAAGAGTCAAGTCTGTGTGGCAACATACCTTCAACCTCTGATYTG	4800
Db	4860	GAAGACAGACCCCAAGAGTCAAGTCTGTGTGGCAACATACCTTCAACCTCTGATYTG	4919
QY	4801	AAAGTTCCCAATTAAGAGTTGCAAGATCTGCCAGAGTCCAGCTGCTGCTACTACT	4860
Db	4920	AAAGTTCCCAATTAAGAGTTGCAAGATCTGCCAGAGTCCAGCTGCTGCTACTACT	4979
QY	4861	GATACTGCTGGGTATATGCAATGGAAAGAGTGTGACAGAGGAGAAAGCAATTTGACA	4920
Db	4980	GATACTGCTGGGTATATGCAATGGAAAGAGTGTGACAGAGGAGAAAGCAATTTGACA	5039
QY	4921	GCTTCAACAGAAAGGCTCAACAAAAGATGTTCATGTGTGTCTGTGCTTACCCCGGAA	4980
Db	5040	GCTTCAACAGAAAGGCTCAACAAAAGATGTTCATGTGTGTCTGTGCTTACCCCGGAA	5099
QY	4981	GAATTTATGCTGCTGATCAAGTTTSCAGAAACACCAATCATCTTAATCTAAT	5040
Db	5100	GAATTTATGCTGCTGATCAAGTTTSCAGAAACACCAATCATCTTAATCTAAT	5159
QY	5041	ACTGAAGAGTACTCATGTGTTATGAAACAGATGCTGAGTTGTGTGAACGACA	5100
Db	5160	ACTGAAGAGTACTCATGTGTTATGAAACAGATGCTGAGTTGTGTGAACGACA	5219
QY	5101	CTGAATATTTTCTAGAAATTTGCGGAGGAGAAATGGGTAGTACTATTTCTGGGTACC	5160
Db	5220	CTGAATATTTTCTAGAAATTTGCGGAGGAGAAATGGGTAGTACTATTTCTGGGTACC	5279
QY	5161	CAGTCTATTTAAAGAAAGAAATGCTGATGAGCATGTTTGAAGTCAAGAGAGATGTG	5220
Db	5280	CAGTCTATTTAAAGAAAGAAATGCTGATGAGCATGTTTGAAGTCAAGAGAGATGTG	5339
QY	5221	GTCATGGAAGAAACCAAGGTCCAAAGGCGAGCAAGAGATCCAGACAGAAAGATC	5280
Db	5340	GTCATGGAAGAAACCAAGGTCCAAAGGCGAGCAAGAGATCCAGACAGAAAGATC	5399
QY	5281	TTTCAGGGGCTAGAAATGTTGCTATGAGGCGCTTCCAAACATAGCCCAAGATCAAGT	5340
Db	5400	TTTCAGGGGCTAGAAATGTTGCTATGAGGCGCTTCCAAACATAGCCCAAGATCAAGT	5459
QY	5341	GAATGAGTGTACAGCTGTGTGTCTCTGTGTGTAAGAGCTTTCATCATTCACCTT	5400
Db	5460	GAATGAGTGTACAGCTGTGTGTCTCTGTGTGTAAGAGCTTTCATCATTCACCTT	5519
QY	5401	GGCAGAGTGTCCACCAATTTGTGTGTGTGACGACAGATGCTGTGACAGAGCAATGGC	5460
Db	5520	GGCAGAGTGTCCACCAATTTGTGTGTGTGACGACAGATGCTGTGACAGAGCAATGGC	5579
QY	5461	TTTCATGCAATTTGGGAGAGTGTGTGAGGACGCTGTGTGACCCGAGAGTGGGTGGAC	5520
Db	5580	TTTCATGCAATTTGGGAGAGTGTGTGAGGACGCTGTGTGACCCGAGAGTGGGTGGAC	5639
QY	5521	AGTGTAGCATCTACAGATGCTGAGAGCTGGACACTTACCTGATATCCCAAGATCCCCAC	5580
Db	5640	AGTGTAGCATCTACAGATGCTGAGAGCTGGACACTTACCTGATATCCCAAGATCCCCAC	5699

OY 5581 AGCCACTAC 5589
DB 5700 AGCCACTAC 5708

RESULT 12

US-08-483-554B-1
Sequence 1, Application US/08483554B
Patent No. 5747282

GENERAL INFORMATION:

APPLICANT: Skolnick, Mark H.
APPLICANT: Goldgar, David E.
APPLICANT: Miki, Yoshio
APPLICANT: Swenson, Jeff
APPLICANT: Kamp, Alexander
APPLICANT: Harshman, Keith D.
APPLICANT: Shattuck-Eidens, Donna M.
APPLICANT: Tavelgian, Sean V.
APPLICANT: Wiseman, Roger W.
APPLICANT: Futreal, P. Andrew
TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
TITLE OF INVENTION: Susceptibility Gene
NUMBER OF SEQUENCES: 85
CORRESPONDENCE ADDRESS:
ADDRESS: Venable, Baetjer, Howard & Civiletti, LLP
STREET: 1201 New York Avenue, N.W., Suite 1000
CITY: Washington
STATE: DC
COUNTRY: USA
ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentln Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/483,554B
FILING DATE: 07-JUN-1995
CLASSIFICATION: 514

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:

APPLICATION DATA:

APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Jhenn, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:

SEQUENCE CHARACTERISTICS:

LENGTH: 5914 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
MOLECULE TYPE: cDNA
HYPOTHETICAL: NO
ANTI-SENSE: NO
ORIGINAL SOURCE: Homo sapiens
FEATURE:

NAME/KEY: CDS
LOCATION: 120..5708
US-08-483-554B-1

Query Match 99.98; Score 5585.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

OY	1	ATGATTTATCTGCTTCCGGTGAAGAACTACAAATGCAATTAATGATTCAGCAAA	60
DB	120	ATGATTTATCTGCTTCCGGTGAAGAACTACAAATGCAATTAATGATTCAGCAAA	179
OY	61	ATCTTAGAGTGTCCCATCTCTCTGAGTTGATCAAGAACTCTCTCCCAAGTGTAC	120
DB	180	ATCTTAGAGTGTCCCATCTCTCTGAGTTGATCAAGAACTCTCTCCCAAGTGTAC	239
OY	121	CACATATTTTGCAAATTTTGCATGCTGAACCTTCAACAGAAAGAAAGGCTTCACG	180
DB	240	CACATATTTTGCAAATTTTGCATGCTGAACCTTCAACAGAAAGAAAGGCTTCACG	299
OY	181	TGCTCTTATAGATATATACCAAGAGGCTTACAGAAAGTACAGATTAGT	240
DB	300	TGCTCTTATAGATATATACCAAGAGGCTTACAGAAAGTACAGATTAGT	359
OY	241	CAACTGTGGAAGACTATTAATCATTTGCTTTTCACTTGTGACACAGTTGGAG	300
DB	360	CAACTGTGGAAGACTATTAATCATTTGCTTTTCACTTGTGACACAGTTGGAG	419
OY	301	TATGCAAAACAGCTATTAATTTTGCAGAAAGAAATATACCTCTGAAATCAATTAAGAT	360
DB	420	TATGCAAAACAGCTATTAATTTTGCAGAAAGAAATATACCTCTGAAATCAATTAAGAT	479
OY	361	GAACTTTCTATATCAACCAAGATGGCTACAGAAACCGTCCAAAGAACTTCTACAGT	420
DB	480	GAACTTTCTATATCAACCAAGATGGCTACAGAAACCGTCCAAAGAACTTCTACAGT	539
OY	421	GAACCCGAAATCTCTCTTCCAGAAACCGTCTGAGTCCAACTCTCTTAACTTGA	480
DB	540	GAACCCGAAATCTCTCTTCCAGAAACCGTCTGAGTCCAACTCTCTTAACTTGA	599
OY	481	ACTGTGAACTGTGAGAACCAAGCGGATACACCTCAAAAGCGTCTGTACATT	540
DB	600	ACTGTGAACTGTGAGAACCAAGCGGATACACCTCAAAAGCGTCTGTACATT	659
OY	541	GAATTTGGATCTGATTTCTTCTGAGATACCTTAATAGGAACCTTATGAGTGGGA	600
DB	660	GAATTTGGATCTGATTTCTTCTGAGATACCTTAATAGGAACCTTATGAGTGGGA	719
OY	601	GATCAAGATTTGTACAAATCACCCCTCAAGAACCAAGGATGAATCACTGTTGATTC	660
DB	720	GATCAAGATTTGTACAAATCACCCCTCAAGAACCAAGGATGAATCACTGTTGATTC	779
OY	661	GCAAAAAAGCGCTGTGATTTTCTGAGACGATGTAACTAACTGAAATCAATCA	720
DB	780	GCAAAAAAGCGCTGTGATTTTCTGAGACGATGTAACTAACTGAAATCAATCA	839
OY	721	CCCAATATATATGATTTTGAACACCACTGAGAAAGGCTGAGTGAAGCAATCA	780
DB	840	CCCAATATATATGATTTTGAACACCACTGAGAAAGGCTGAGTGAAGCAATCA	899
OY	781	TATCAGGATGTTGTTTCAAACTGATGTGAGGCAATGTGCAAAATACATGATCC	840
DB	900	TATCAGGATGTTGTTTCAAACTGATGTGAGGCAATGTGCAAAATACATGATCC	959
OY	841	AGCTCATTTACAGATGAGAACAGATTTATTTACTCACTAAAGACAGATGATGAA	900
DB	960	AGCTCATTTACAGATGAGAACAGATTTATTTACTCACTAAAGACAGATGATGAA	1019
OY	901	AAGGCTGAATTTCTATTAATAAGCAACAGGCTGCTAGCAAGAGCAATCAATCA	960
DB	1020	AAGGCTGAATTTCTATTAATAAGCAACAGGCTGCTAGCAAGAGCAATCAATCA	1079
OY	961	TGGGCTGGAAGTAAGAAACATTAATGATAGCGGAGCTCCACAGAGAAAAAGGTA	1020

Db 1080 TGGCGTGAAGTAAGAAACAGTAATAGCGGACCTCCAGACAGAAAAAGTA 1139
QY 1021 GATCTGAATGCTGATCCCTGTGTAGAGAAAAAGATGGAATAGCAGAACTGCGATC 1080
Db 1140 GATCTGAATGCTGATCCCTGTGTAGAGAAAAAGATGGAATAGCAGAACTGCGATC 1199
QY 1081 TCAGAGAAATCCTAGAGATAGTAAGATGTTCTTGGATTAACATAATAGCAGATTCAG 1140
Db 1200 TCAGAGAAATCCTAGAGATAGTAAGATGTTCTTGGATTAACATAATAGCAGATTCAG 1259
QY 1141 AAAGTTATGAGTGGTTTCCAGAAAGTATGAACTGTTAGTTGAGTCTTAATAGGATAG 1200
Db 1260 AAAGTTATGAGTGGTTTCCAGAAAGTATGAACTGTTAGTTGAGTCTTAATAGGATAG 1319
QY 1201 GGGGAGTCTGAATCAATGCCAAAGTAGTATGATGAGTCTTAATAGGATAG 1260
Db 1320 GGGGAGTCTGAATCAATGCCAAAGTAGTATGATGAGTCTTAATAGGATAG 1379
QY 1261 GAATATCTGTTCTTCAGAGAAATAGACTTACGCGCATGATCTCATGAGCTTTA 1320
Db 1380 GAATATCTGTTCTTCAGAGAAATAGACTTACGCGCATGATCTCATGAGCTTTA 1439
QY 1321 ATATGTAAGTGAAGAGTTCACCTCCAAATCAGTAGAGTAATATTGAACAAATA 1380
Db 1440 ATATGTAAGTGAAGAGTTCACCTCCAAATCAGTAGAGTAATATTGAACAAATA 1499
QY 1381 TTTGGAAACCTATCGAGAGAAAGGCAAGCCCTCCCACTTAAGCCATGTAATAAT 1440
Db 1500 TTTGGAAACCTATCGAGAGAAAGGCAAGCCCTCCCACTTAAGCCATGTAATAAT 1559
QY 1441 CTATATATAGAGATTTGTTACTAGAGCCACAGATTAATCAAGAGCTCCCTCAAT 1500
Db 1560 CTATATATAGAGATTTGTTACTAGAGCCACAGATTAATCAAGAGCTCCCTCAAT 1619
QY 1501 AAATTAAGCCTTAAGAGAGACCTCATCAGGCTCTCACTCGAGATTTTTCAGAA 1560
Db 1620 AAATTAAGCCTTAAGAGAGACCTCATCAGGCTCTCACTCGAGATTTTTCAGAA 1679
QY 1561 GCAGATTTGGCAGTTCAAAAGACCTCTGAAATGATTAATCAAGGAACTAACCAAGGAG 1620
Db 1680 GCAGATTTGGCAGTTCAAAAGACCTCTGAAATGATTAATCAAGGAACTAACCAAGGAG 1739
QY 1621 CAGAAATGCTCAAGATGATTAATTAATAGTGTCTAGATTAATTAATTAATTAAT 1680
Db 1740 CAGAAATGCTCAAGATGATTAATTAATAGTGTCTAGATTAATTAATTAATTAAT 1799
QY 1681 TCTATTCGAAATGAGAAAAATCCTAACCAATAGAAATACGCAAAAAAATCTGCTTC 1740
Db 1800 TCTATTCGAAATGAGAAAAATCCTAACCAATAGAAATACGCAAAAAAATCTGCTTC 1859
QY 1741 AAAAGCAAGCTGAACCTATTAAGCAGATTAAGCAATATGGAATGGAATTAATATC 1800
Db 1860 AAAAGCAAGCTGAACCTATTAAGCAGATTAAGCAATATGGAATGGAATTAATATC 1919
QY 1801 CACATTCACAAAGCACTTAAGAAATAGGCTGAGGAGAAAGTCTTCAACGAGCATTT 1860
Db 1920 CACATTCACAAAGCACTTAAGAAATAGGCTGAGGAGAAAGTCTTCAACGAGCATTT 1979
QY 1861 CATCGCTTGAATAGTAGTAGTAAGAAATTAAGCCACCTAATTTGTAAGTAATGGA 1920
Db 1980 CATCGCTTGAATAGTAGTAGTAAGAAATTAAGCCACCTAATTTGTAAGTAATGGA 2039
QY 1921 ATTGATAGTTCTTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCAATC 1980
Db 2040 ATTGATAGTTCTTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCAATC 2099
QY 1981 AGGCACAGCAGAAACCTTAACAATCATGGAAGTAAAGAACTGCACTGAGCCAGAG 2040
Db 2100 AGGCACAGCAGAAACCTTAACAATCATGGAAGTAAAGAACTGCACTGAGCCAGAG 2159
QY 2041 AGTAAAGCAAGCAATGAAGAGACAAAGTAAGACATGACATGACTTTCCAGAGCTG 2100

Db 2160 AGTAAAGCAAGCAATGAAGAGACAAAGTAAGAAAGATGACAGCATCTTCCAGAGCTG 2219
QY 2101 AAGTTAAACAAATGACACCTGTTCTTTCTAAGTGTTCAAATACAGTAAGCACTTAAGAA 2160
Db 2220 AAGTTAAACAAATGACACCTGTTCTTTCTAAGTGTTCAAATACAGTAAGCACTTAAGAA 2279
QY 2161 TTTGTCAATCTGACCTTCCAGAGAGAAAAAGAGAAATAGAAACAGTTAAAGTG 2220
Db 2280 TTTGTCAATCTGACCTTCCAGAGAGAAAAAGAGAAATAGAAACAGTTAAAGTG 2339
QY 2221 TCTATTAATGCTGAAGAGCCCCAAAGATCTCATGTTAAGTGAAGAAAGGTTTGCAACT 2280
Db 2340 TCTATTAATGCTGAAGAGCCCCAAAGATCTCATGTTAAGTGAAGAAAGGTTTGCAACT 2399
QY 2281 GAAGATCTGTAGAGAGTAGCAGATTTTCAATGTTACTGTTACTGATTAATGAGCAGT 2340
Db 2400 GAAGATCTGTAGAGAGTAGCAGATTTTCAATGTTACTGTTACTGATTAATGAGCAGT 2459
QY 2341 GAAGATCTGTAGAGAGTAGCAGATTTGAGAGTTAGCATCTAGGGAAGCAAAACCAATTA 2400
Db 2460 GAAGATCTGTAGAGAGTAGCAGATTTGAGAGTTAGCATCTAGGGAAGCAAAACCAATTA 2519
QY 2401 TGTGTAGTCACTGTCAGACATTTGAAACCCCAAGGAGACTAATTCATGTTGTTCCAA 2460
Db 2520 TGTGTAGTCACTGTCAGACATTTGAAACCCCAAGGAGACTAATTCATGTTGTTCCAA 2579
QY 2461 GATATTAAGAAATGACACAGAAAGCTTTAAGTATCATTTGGACATGAAATTAACACAGT 2520
Db 2580 GATATTAAGAAATGACACAGAAAGCTTTAAGTATCATTTGGACATGAAATTAACACAGT 2639
QY 2521 CGGGAACCAAGCATTAAGAAATGGAAGAAAGTAACTGTATGTCAGTATTTGCAAGATCA 2580
Db 2640 CGGGAACCAAGCATTAAGAAATGGAAGAAAGTAACTGTATGTCAGTATTTGCAAGATCA 2699
QY 2581 TTTCAAGTGTCAAAAGCGCAGTCAATTTGCTGTTTCAATCCAGAAATGCAAGAG 2640
Db 2700 TTTCAAGTGTCAAAAGCGCAGTCAATTTGCTGTTTCAATCCAGAAATGCAAGAG 2759
QY 2641 GAATGTGCAACATTTCTGCCCACCTGTGGGTCTTTAAAGAAACCAATGCAAGTCACT 2700
Db 2760 GAATGTGCAACATTTCTGCCCACCTGTGGGTCTTTAAAGAAACCAATGCAAGTCACT 2819
QY 2701 TTTGAATGTGAACAAAGAAAGAAATCAAGAAAGATAGTATTAATCAACGCTGTA 2760
Db 2820 TTTGAATGTGAACAAAGAAAGAAATCAAGAAAGATAGTATTAATCAACGCTGTA 2879
QY 2761 CAGAGATTAATATACATGACGAGCTTCTGCTGTGTGTGTCAGAAAGTAAGCAGTTGAT 2820
Db 2880 CAGAGATTAATATACATGACGAGCTTCTGCTGTGTGTGTCAGAAAGTAAGCAGTTGAT 2939
QY 2821 AATGCCAAATGTAGATCAAGAGAGGCTAGGTTTGTCTATCATCTCAGTTCAAGAGC 2880
Db 2940 AATGCCAAATGTAGATCAAGAGAGGCTAGGTTTGTCTATCATCTCAGTTCAAGAGC 2999
QY 2881 AACGAACTGACATCATTTACCCAAATTAACATGAGCTTTTACAAAACCATATCGTATA 2940
Db 3000 AACGAACTGACATCATTTACCCAAATTAACATGAGCTTTTACAAAACCATATCGTATA 3059
QY 2941 CCACACCTTTTCCATCAAGTCAATTTGTTAAACCTAATGTAAAGAAAAATCGCTAGAG 3000
Db 3060 CCACACCTTTTCCATCAAGTCAATTTGTTAAACCTAATGTAAAGAAAAATCGCTAGAG 3119
QY 3001 GAAACCTTTGAGGAACATTCATATGTCACGTGAAGAGAAATGGGAAATGGAACATTCGA 3060
Db 3120 GAAACCTTTGAGGAACATTCATATGTCACGTGAAGAGAAATGGGAAATGGAACATTCGA 3179
QY 3061 AGTACAGTGAACAAATTAAGCCGTAATTAACATTAAGAAATGTTTAAAGAACGACAG 3120
Db 3180 AGTACAGTGAACAAATTAAGCCGTAATTAACATTAAGAAATGTTTAAAGAACGACAG 3239
QY 3121 TCAAGCAATATTAATGAAGTAGTGTCCAGTACTAATGAATGGGCTCCAGTATTAATGA 3180
Db 3240 TCAAGCAATATTAATGAAGTAGTGTCCAGTACTAATGAATGGGCTCCAGTATTAATGA 3299

OY 3181 ATAGTTCACGTGATGAAGAAACATTCAGACAGACTAGTAGAAGAGAGGCCAAATTTG 3240
DB 3300 ATAGGTTCCAGTGTGATGAAGAAACATTCAGACAGACTAGTAGAAGAGAGGCCAAATTTG 3359
OY 3241 AATGCTATGCTTGAATTAAGGGGTTTGCACCTGAGGCTATTAACAAAGTCTTCTGGA 3300
DB 3360 AATGCTATGCTTGAATTAAGGGGTTTGCACCTGAGGCTATTAACAAAGTCTTCTGGA 3419
OY 3301 AGTAATGTAGCAATCCGTAATTAAGAAAGCAAGAAATTAAGAAAGTGTTCACAGCTTT 3360
DB 3420 AGTAATGTAGCAATCCGTAATTAAGAAAGCAAGAAATTAAGAAAGTGTTCACAGCTTT 3479
OY 3361 AATACAGATTTCTCTCCATCTCATCTGATTTAGATTAAGAAAGCTATGGAAGTGT 3420
DB 3480 AATACAGATTTCTCTCCATCTCATCTGATTTAGATTAAGAAAGCTATGGAAGTGT 3539
OY 3421 CATGCAATCTCAGGTTTGTCTGAGACACACCTGATGACCTGTTAGATGATGTAATAAG 3480
DB 3540 CATGCAATCTCAGGTTTGTCTGAGACACACCTGATGACCTGTTAGATGATGTAATAAG 3599
OY 3481 GAATATCTACTTTTGTCTGAAAGAAATGACATTAAGAAAGTGTCTGTTTGAAGAAAGC 3540
DB 3600 GAATATCTACTTTTGTCTGAAAGAAATGACATTAAGAAAGTGTCTGTTTGAAGAAAGC 3659
OY 3541 GTCCAGAAAGAGAGAGCTTAGCAGAGTCCCTGACCTTACCCATACATTTGGCTCAG 3600
DB 3660 GTCCAGAAAGAGAGAGCTTAGCAGAGTCCCTGACCTTACCCATACATTTGGCTCAG 3719
OY 3601 GGTATCCGAGAGAGGGGCCAGAGAAATTAAGATCTCAGAGAAAGAACTATCTAGTAGAT 3660
DB 3720 GGTATCCGAGAGAGGGGCCAGAGAAATTAAGATCTCAGAGAAAGAACTATCTAGTAGAT 3779
OY 3661 GAAGAGCTTCCCTGCTTCCAACTGTTGTTATTTGTAAGAAACAAATACCTCTCAG 3720
DB 3780 GAAGAGCTTCCCTGCTTCCAACTGTTGTTATTTGTAAGAAACAAATACCTCTCAG 3839
OY 3721 TCTACTAGGCACTAGCAGCGTGTCTACGAGTGTCTGTTAAGAACACAGAGAGAAATTTA 3780
DB 3840 TCTACTAGGCACTAGCAGCGTGTCTACGAGTGTCTGTTAAGAACACAGAGAGAAATTTA 3899
OY 3781 TTATCATTTGAAGAAATAGCTTAATAGTCTGACGTAAACAGGTAAATTTGGCAAGGCACTCT 3840
DB 3900 TTATCATTTGAAGAAATAGCTTAATAGTCTGACGTAAACAGGTAAATTTGGCAAGGCACTCT 3959
OY 3841 CAGGAACATCACTTATGAGAGAAACAAATGTTCTGTAGCTGTTCTTCTCAGAGTC 3900
DB 3960 CAGGAACATCACTTATGAGAGAAACAAATGTTCTGTAGCTGTTCTTCTCAGAGTC 4019
OY 3901 AGTGAATTTGAAGACTTGTACTGCAATTAACAACACCCAGATCCTTCTTGTGATTTCT 3960
DB 4020 AGTGAATTTGAAGACTTGTACTGCAATTAACAACACCCAGATCCTTCTTGTGATTTCT 4079
OY 3961 TCCAAACAAATAGAGGCACTGCTGAAAGCCAGAGAGTGTGCTGAGTGCACAGAAATTTG 4020
DB 4080 TCCAAACAAATAGAGGCACTGCTGAAAGCCAGAGAGTGTGCTGAGTGCACAGAAATTTG 4139
OY 4021 GTTTCAGATGATGAAGAAAGAGAGAGGCTTGAAGAAATTAATCAAGAGAGCAAGC 4080
DB 4140 GTTTCAGATGATGAAGAAAGAGAGAGGCTTGAAGAAATTAATCAAGAGAGCAAGC 4199
OY 4081 ATGGAATTCAAACCTTAGGTGAAGAGCAGATCTGGGTGTGAGAGTGAAGCAAGGCTCTGAA 4140
DB 4200 ATGGAATTCAAACCTTAGGTGAAGAGCAGATCTGGGTGTGAGAGTGAAGCAAGGCTCTGAA 4259
OY 4141 GACGTCTCAGGGGCTATCTCTCAGAGTGCATTTTAAACCACTCAGCAGAGGATACCATG 4200
DB 4260 GACGTCTCAGGGGCTATCTCTCAGAGTGCATTTTAAACCACTCAGCAGAGGATACCATG 4319
OY 4201 CAACATTAACCTGATTAAGAGCTCCAGAGAGAAATGGCTGAACATAGAAAGCTGTTGAACAG 4260
DB 4320 CAACATTAACCTGATTAAGAGCTCCAGAGAGAAATGGCTGAACATAGAAAGCTGTTGAACAG 4379

OY 4261 CATGGAGCCAGGCTTCTACAGCTACCTTCCATCATAGTGACTCTTCTGCCCCGAG 4320
DB 4380 CATGGAGCCAGGCTTCTACAGCTACCTTCCATCATAGTGACTCTTCTGCCCCGAG 4439
OY 4321 GACCTGGCAATTCAGAAACAAAGCAGATCAGAGAAAGAGATTAATTAATTAATTAATTA 4380
DB 4440 GACCTGGCAATTCAGAAACAAAGCAGATCAGAGAAAGAGATTAATTAATTAATTAATTA 4499
OY 4381 AGTGAATCCCTATTAAGCAATTCAGAAAGGCTTCTGCAAGCAATTTGAGGTGCT 4440
DB 4500 AGTGAATCCCTATTAAGCAATTCAGAAAGGCTTCTGCAAGCAATTTGAGGTGCT 4559
OY 4441 GCAGATAGTCTTACAGTAATAAATTAAGAAACAGAGAGTGAAGAGTCAATCCCTCTAAA 4500
DB 4560 GCAGATAGTCTTACAGTAATAAATTAAGAAACAGAGAGTGAAGAGTCAATCCCTCTAAA 4619
OY 4501 TGCCCATCATTAAGATGATGATGTTGATGCAAGTGTCTGAGAGTCTTCAAGATAGA 4560
DB 4620 TGCCCATCATTAAGATGATGATGTTGATGCAAGTGTCTGAGAGTCTTCAAGATAGA 4679
OY 4561 AACTAACCATCTCAAGAGAGAGCTCATTAAGTGTGATATGTGAGAGAGCAACAGCTGGA 4620
DB 4680 AACTAACCATCTCAAGAGAGAGCTCATTAAGTGTGATGATGAGAGAGCAACAGCTGGA 4739
OY 4621 GAGTCTGGGCCACAGATTTGACGGAACATCTTACTTGCAGAGGCAAGATCTAGAGGA 4680
DB 4740 GAGTCTGGGCCACAGATTTGACGGAACATCTTACTTGCAGAGGCAAGATCTAGAGGA 4799
OY 4681 ACCCCTTACCTGGAATCTGGAATCAGCCTCTCTGATGACCTGAAATCTGATCTTCT 4740
DB 4800 ACCCCTTACCTGGAATCTGGAATCAGCCTCTCTGATGACCTGAAATCTGATCTTCT 4859
OY 4741 GAAGACAGAGGCCAGAGATCAGCTGCTTGGCAACATACATCTCAACCTGCAATTTG 4800
DB 4860 GAAGACAGAGGCCAGAGATCAGCTGCTTGGCAACATACATCTTCAACCTGCAATTTG 4919
OY 4801 AAAGTTCGCCAATTAAGAAATTTGACAGAAATCTGCCAGATCCAGCTGCTCATTAATCT 4860
DB 4920 AAAGTTCGCCAATTAAGAAATTTGACAGAAATCTGCCAGATCCAGCTGCTCATTAATCT 4979
OY 4861 GATACCTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGCAGAGAGAGCAAGATTTGCA 4920
DB 4980 GATACCTGCTGGGTATTAATGCAATGGAAGAAAGTGTGAGCAGAGAGAGCAAGATTTGCA 5039
OY 4921 GCTTCAACAGAAAGGCTCAACAAAGAAATGTCATGAGTGTGCTGAGCTGACCCAGAA 4980
DB 5040 GCTTCAACAGAAAGGCTCAACAAAGAAATGTCATGAGTGTGCTGAGCTGACCCAGAA 5099
OY 4981 GAATTTATGCTGCTGATCAAGTGTGCCAGAAACACACATCACTTAATTAATCTAAT 5040
DB 5100 GAATTTATGCTGCTGATCAAGTGTGCCAGAAACACACATCACTTAATTAATCTAAT 5159
OY 5041 ACTGAGAGAGCTACTCATGTTGTTATGAAACACAGATGTGAGTGTGTGGAACGGACA 5100
DB 5160 ACTGAGAGAGCTACTCATGTTGTTATGAAACACAGATGTGAGTGTGTGGAACGGACA 5219
OY 5101 CTGAAATTTTCTTAGGAATTTGCCGAGAGAAATGGGATGATTAATTTCTGGGTGACC 5160
DB 5220 CTGAAATTTTCTTAGGAATTTGCCGAGAGAAATGGGATGATTAATTTCTGGGTGACC 5279
OY 5161 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATGTTTGAAGTGCAGAGAGAGATGTG 5220
DB 5280 CAGTCTATTAAGAAAGAAATGCTGAATGAGCATGTTTGAAGTGCAGAGAGAGATGTG 5339
OY 5221 GTCAATGGAAGAAACCAAGGTCCTGAAAGGAGACAGAGATCCAGAGAGAGAAAGATC 5280
DB 5340 GTCAATGGAAGAAACCAAGGTCCTGAAAGGAGACAGAGATCCAGAGAGAGAAAGATC 5399
OY 5281 TTCAAGGGGCTAGAAATCTGTTGCTATGAGGCTTTCACCAATGAGCCAGATCAACTG 5340
DB 5400 TTCAAGGGGCTAGAAATCTGTTGCTATGAGGCTTTCACCAATGAGCCAGATCAACTG 5459
OY 5341 GAATGATGTTAGAGCTGTGTGCTTGTGAGTGAAGAGCTTTCATCACTTACCTT 5400

```

Db      5460 GAAAGGATGCTACAGCTGTGTGCTCTCTGTGTGGAAGGACCTTCATTCACACCTT 5519
Qy      5401 GGCACAGGTGTCCACCAATGTGTGTGTGAGCCAGATGCTTGACAGAGGACATGGC 5460
Db      5520 GGCACAGGTGTCCACCAATGTGTGTGTGAGCCAGATGCTTGACAGAGGACATGGC 5579
Qy      5461 TTCATGCAATTTGGGACAGATGTGTGAGGACCTGTGTGTGAGCCGAGAGTGTGTGGAC 5520
Db      5580 TTCATGCAATTTGGGACAGATGTGTGAGGACCTGTGTGTGAGCCGAGAGTGTGTGGAC 5639
Qy      5521 AGTGTAGACTCTACCAATGTGTGAGGAGCTGTGACACCTTATACCCAGATGCCAC 5580
Db      5640 AGTGTAGACTCTACCAATGTGTGAGGAGCTGTGACACCTTATACCCAGATGCCAC 5699
Qy      5581 AGCCACTAC 5589
Db      5700 AGCCACTAC 5708

```

```

RESULT 13
US-08-488-011B-1
; Sequence 1, Application us/08488011B
; Patent No. 5753441
; GENERAL INFORMATION:
; APPLICANT: SKOLNICK, Mark H.
; APPLICANT: Goldfar, David E.
; APPLICANT: Miki, Yoshio
; APPLICANT: Swenson, Jeff
; APPLICANT: Kamb, Alexander
; APPLICANT: Harshman, Keith D.
; APPLICANT: Shattuck-Eidens, Donna M.
; APPLICANT: Tavligian, Sean V.
; APPLICANT: Wiseman, Roger W.
; APPLICANT: Futreal, P. Andrew
; TITLE OF INVENTION: 17q-Linked Breast and Ovarian Cancer
; TITLE OF INVENTION: Susceptibility Gene
; NUMBER OF SEQUENCES: 85
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
; STREET: 1201 New York Avenue, N.W., Suite 1000
; CITY: Washington
; STATE: DC
; COUNTRY: USA
; ZIP: 20005
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/488, 011B
; FILING DATE: 07-JUN-1995
; CLASSIFICATION: 435
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/409,305
; FILING DATE: 24-MAR-1995
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/348,824
; FILING DATE: 29-NOV-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/308,104
; FILING DATE: 16-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/300,266
; FILING DATE: 02-SEP-1994
; PRIOR APPLICATION DATA:
; APPLICATION NUMBER: US 08/289,221
; FILING DATE: 12-AUG-1994
; ATTORNEY/AGENT INFORMATION:
; NAME: Ihnen, Jeffrey L.
; REGISTRATION NUMBER: 28,957
; REFERENCE/DOCKET NUMBER: 24884-109347-09

```

```

; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 202-962-4810
; TELEFAX: 202-962-8300
; INFORMATION FOR SEQ ID NO: 1:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 5914 base pairs
; TYPE: nucleic acid
; STRANDEDNESS: double
; TOPOLOGY: linear
; MOLECULE TYPE: cDNA
; HYPOTHEICAL: NO
; ANTI-SENSE: NO
; ORIGINAL SOURCE:
; ORGANISM: Homo sapiens
; FEATURE:
; NAME/KEY: CDS
; LOCATION: 120..5708
; US-08-488-011B-1

```

```

Query Match          99.9%; Score 5585.8; DB 1; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy      1 ATGATTTATCTGCTTCTCGGCTTGAGAACTACAAAATGTCATTATGCTATGCGAGAA 60
Db      120 ATGATTTATCTGCTTCTCGGCTTGAGAACTACAAAATGTCATTATGCTATGCGAGAA 179
Qy      61 ATCTAGAGTGTCCCATCTGTCTGAGTTGATCAAGAACCTGCTCCACAAAGTGTGAC 120
Db      180 ATCTAGAGTGTCCCATCTGTCTGAGTTGATCAAGAACCTGCTCCACAAAGTGTGAC 239
Qy      121 CACATATTTTGCMAATTTTGCATGCTGAACTTCTCAACGAGAAAGAGGCTTTCACAG 180
Db      240 CACATATTTTGCMAATTTTGCATGCTGAACTTCTCAACGAGAAAGAGGCTTTCACAG 299
Qy      181 TGCTCTTATGTAGAAATGATATACCAAAAGAGGCTTTCACGAAAGATAGAGATTAGT 240
Db      300 TGCTCTTATGTAGAAATGATATACCAAAAGAGGCTTTCACGAAAGATAGAGATTAGT 359
Qy      241 CAACCTGTTGAAGAGCTATGAAATCATTTGCTTTTTCAGTTGACACAGGTTTGGAG 300
Db      360 CAACCTGTTGAAGAGCTATGAAATCATTTGCTTTTTCAGTTGACACAGGTTTGGAG 419
Qy      301 TATGCAAAACAGCTATTAATTTTGCMAAAAGAGAAATACCTCTGTAACATTAAGAT 360
Db      420 TATGCAAAACAGCTATTAATTTTGCMAAAAGAGAAATACCTCTGTAACATTAAGAT 479
Qy      361 GAAGTTTATCATTCACAAAGATATGGCTACGAAACCGTGCCAAAGAACTTCTACAGAGT 420
Db      480 GAAGTTTATCATTCACAAAGATATGGCTACGAAACCGTGCCAAAGAACTTCTACAGAGT 539
Qy      421 GAACCCGAAATCCCTCTCTTGCAGAAACAGTCTCAGTGTCCAACTCTTAACCTTGA 480
Db      540 GAACCCGAAATCCCTCTCTTGCAGAAACAGTCTCAGTGTCCAACTCTTAACCTTGA 599
Qy      481 ACTGTGAGACTGTGAGGACAAAGATATGGCTACGAAACCGTGCCAAAGAACTTCTACAG 540
Db      600 ACTGTGAGACTGTGAGGACAAAGATATGGCTACGAAACCGTGCCAAAGAACTTCTACAG 659
Qy      541 GAATTTGGATGCTGATTTCTGTGAGATACGCTTAATAGGCAACTTATTCAGATGGGGA 600
Db      660 GAATTTGGATGCTGATTTCTGTGAGATACGCTTAATAGGCAACTTATTCAGATGGGGA 719
Qy      601 GATCAAGATTTGTACAAATCACCCCTCAAGAAACAGGATGATCAATTTGATTTGATTC 660
Db      720 GATCAAGATTTGTACAAATCACCCCTCAAGAAACAGGATGATCAATTTGATTTGATTC 779
Qy      661 GCAAAAAAGGCTGCTTGTGAATTTTGTGACAGGATGTAAACAATCTGAACATCATCAA 720
Db      780 GCAAAAAAGGCTGCTTGTGAATTTTGTGACAGGATGTAAACAATCTGAACATCATCAA 839
Qy      721 CCCAGTATATATGTTTGAACACACCTGAGAAAGCTGACCTAGAGGATTCAGAAAG 780

```

Db 840 CCCAGTATATATGATTTTGAACACCACCTGAGAGGCGTGACGCTGAGAGGCACTCCAGAAAG 899
Qy 781 TATCAGGTAATCTCTGTTTCAAACTTGATGTGGAGCCATGTGGCACAATATCTCATGCC 840
Db 900 TATCAGGTAATCTCTGTTTCAAACTTGATGTGGAGCCATGTGGCACAATATCTCATGCC 959
Qy 841 AGCTCATATCAGCATGAGACAGCAGTTTATTACACACTAAAGACAGAAATGATGTAA 900
Db 960 AGCTCATATCAGCATGAGACAGCAGTTTATTACACACTAAAGACAGAAATGATGTAA 1019
Qy 901 AAGCGTGAATCTCTGATTAATAAGCAAAACAGCGCTTGGATAGCAAGAGAGCCAACTATACGA 960
Db 1020 AAGCGTGAATCTCTGATTAATAAGCAAAACAGCGCTTGGATAGCAAGAGAGCCAACTATACGA 1079
Qy 961 TGGGCTGGAATTAAGGAAACATGTATATATAGCGGAGCTCCAGCAGCAAGAAAAAGTA 1020
Db 1080 TGGGCTGGAATTAAGGAAACATGTATATAGCGGAGCTCCAGCAGCAAGAAAAAGTA 1139
Qy 1021 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAACTGGCATGC 1080
Db 1140 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGGAATTAAGCAGAACTGGCATGC 1139
Qy 1081 TCAGAGAACTCTAGAGATCTGAAAGATGCTTGGATTAACACTAAATAGCAGATTGAG 1140
Db 1200 TCAGAGAACTCTAGAGATCTGAAAGATGCTTGGATTAACACTAAATAGCAGATTGAG 1259
Qy 1141 AAAGTATATGAGTGTTCAGAGAGATGATGATGATGATGATGATGATGATGATGATGAT 1200
Db 1260 AAAGTATATGAGTGTTCAGAGAGATGATGATGATGATGATGATGATGATGATGATGAT 1319
Qy 1201 GGGGAGTCTGATCAAAATGCAAAAGTAGCTGATGATGATGATGATGATGATGATGATGAT 1260
Db 1320 GGGGAGTCTGATCAAAATGCAAAAGTAGCTGATGATGATGATGATGATGATGATGATGAT 1379
Qy 1261 GAATATCTGCTTCTCAGAGAAATAGACTTACTGCGCAGTATCTCATGAGGCTTAA 1320
Db 1380 GAATATCTGCTTCTCAGAGAAATAGACTTACTGCGCAGTATCTCATGAGGCTTAA 1439
Qy 1321 ATATGTAAGTGAAGAGTCTACCTCCAAATCAGTAGAGATATATATGAGACAAATA 1380
Db 1440 ATATGTAAGTGAAGAGTCTACCTCCAAATCAGTAGAGATATATATGAGACAAATA 1499
Qy 1381 TTTGGGAAACCTATCGGAGAGAGCAAGCCTCCCACTTAAGCCTATGATGAAAT 1440
Db 1500 TTTGGGAAACCTATCGGAGAGAGCAAGCCTCCCACTTAAGCCTATGATGAAAT 1559
Qy 1441 CTAATATAGAGCAATTTGTTACTGAGCCACAGATATACAAAGCGTCCCTCACAAT 1500
Db 1560 CTAATATAGAGCAATTTGTTACTGAGCCACAGATATACAAAGCGTCCCTCACAAT 1619
Qy 1501 AAATTAAGGCTAAAGAGAGCTACATCAGGCGCTTCACTCTGAGATTTATCAAGAA 1560
Db 1620 AAATTAAGGCTAAAGAGAGCTACATCAGGCGCTTCACTCTGAGATTTATCAAGAA 1679
Qy 1561 GCAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAGGAGACTAACCAAGCAG 1620
Db 1680 GCAGATTTGGCAGTTCAAAAGACTCTGAAATGATTAATCAGGAGACTAACCAAGCAG 1739
Qy 1621 CAGAAATGCTCAAGATGATATTTACTATATAGTGTCTATGAGATTAAGCAAAAGTGAT 1680
Db 1740 CAGAAATGCTCAAGATGATATTTACTATATAGTGTCTATGAGATTAAGCAAAAGTGAT 1799
Qy 1681 TCTATTCAGATGAGAAAAATCTAACCCATATAGATCAGTGAAGAAAGATCTGCTTTC 1740
Db 1800 TCTATTCAGATGAGAAAAATCTAACCCATATAGATCAGTGAAGAAAGATCTGCTTTC 1859
Qy 1741 AAAAGCAAGCTGAACCTATTAAGCAGCAGTATTAAGCAATATGAACTGAAATTAATATC 1800
Db 1860 AAAAGCAAGCTGAACCTATTAAGCAGCAGTATTAAGCAATATGAACTGAAATTAATATC 1919
Qy 1801 CACAAATTAAGCACTTAAGAAATAGCTGAGAGAGAAAGTCTTCTACAGGCAATAT 1860
Db 1920 CACAAATTAAGCACTTAAGAAATAGCTGAGAGAGAAAGTCTTCTACAGGCAATAT 1979

Qy 1861 CATGCGCTTGAACCTATAGTATGATGAAATCTTAAGCCCACTTAATGTACTGAAATGCA 1920
Db 1980 CATGCGCTTGAACCTATAGTATGATGAAATCTTAAGCCCACTTAATGTACTGAAATGCA 2039
Qy 1921 ATTGATATGTTTCTAGCAGTGAAGAGATTAAGAAAAAGTATGAAACCAATATGCAATC 1980
Db 2040 ATTGATATGTTTCTAGCAGTGAAGAGATTAAGAAAAAGTATGAAACCAATATGCAATC 2099
Qy 1981 AGGCACAGCAGAAACCTACAACTCATGAGAGTAAAGAACTGCAACTGAGCCAAAG 2040
Db 2100 AGGCACAGCAGAAACCTACAACTCATGAGAGTAAAGAACTGCAACTGAGCCAAAG 2159
Qy 2041 AGTAACCAAGCCAAATGAACACACAGTAAAGACATGACATGATCTTTCCAGAGCTG 2100
Db 2160 AGTAACCAAGCCAAATGAACACACAGTAAAGACATGACATGATCTTTCCAGAGCTG 2219
Qy 2101 AAGTTAACCAATGACCTGCTTCTTCTTACTAAGTTCATTAATACAGTGAACCTTAAGAA 2160
Db 2220 AAGTTAACCAATGACCTGCTTCTTCTTACTAAGTTCATTAATACAGTGAACCTTAAGAA 2279
Qy 2161 TTGTCAATCTTACCTTCCAAAGAGAGAAAGAAAGAAAGAACTAGAAACAGTTAAAGTG 2220
Db 2280 TTGTCAATCTTACCTTCCAAAGAGAGAAAGAAAGAAAGAACTAGAAACAGTTAAAGTG 2339
Qy 2221 TCTAATATATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGCTTTCCAACT 2280
Db 2340 TCTAATATATGCTGAAGACCCCAAGATCTCATGTTAAGTGAAGAAAGGCTTTCCAACT 2399
Qy 2281 GAAAGATCTGTAGAGAGTACAGTATTTCAATGATACCTGTAGTATGATGAGCACTAG 2340
Db 2400 GAAAGATCTGTAGAGAGTACAGTATTTCAATGATACCTGTAGTATGATGAGCACTAG 2459
Qy 2341 GAAAGTATCTGTTACTGAGAAATGACACTTACGAGAGAGCAAGAAACCAATATA 2400
Db 2460 GAAAGTATCTGTTACTGAGAAATGACACTTACGAGAGAGCAAGAAACCAATATA 2519
Qy 2401 TGTGTAGTCTAGTGTGCGAGCTTTGAAAAACCCCAAGGACATTAATCAGTGTGTTCCAA 2460
Db 2520 TGTGTAGTCTAGTGTGCGAGCTTTGAAAAACCCCAAGGACATTAATCAGTGTGTTCCAA 2579
Qy 2461 GATATATGAAATGACACAGAAAGGCTTTAAGTATTCATGAGACATGAAGTTAACCACT 2520
Db 2580 GATATATGAAATGACACAGAAAGGCTTTAAGTATTCATGAGACATGAAGTTAACCACT 2639
Qy 2521 CGGGAACACACATGAAATGAAAGAAAGTGAATGCTGATGCTCAGTATTTCCAGAAATCA 2580
Db 2640 CGGGAACACACATGAAATGAAAGAAAGTGAATGCTGATGCTCAGTATTTCCAGAAATCA 2699
Qy 2581 TTTCAAGGTTTCAAGCGCGCAGTCAATTTGCTGTTTCAATTCAGAGAAATGCAAGAG 2640
Db 2700 TTTCAAGGTTTCAAGCGCGCAGTCAATTTGCTGTTTCAATTCAGAGAAATGCAAGAG 2759
Qy 2641 GAATGTCAACATTTCTGCCCACCTCTGGGTCTTTAAAGAAACAAAGTCCAAAGTCACT 2700
Db 2760 GAATGTCAACATTTCTGCCCACCTCTGGGTCTTTAAAGAAACAAAGTCCAAAGTCACT 2819
Qy 2701 TTTGAATGTGAACAAAGAAAGAAATTCAGAGAAAGATGAGTCTAATATACACCTGTA 2760
Db 2820 TTTGAATGTGAACAAAGAAAGAAATTCAGAGAAAGATGAGTCTAATATACACCTGTA 2879
Qy 2761 CAGACAGTATATACATGCGAGGCTTCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2820
Db 2880 CAGACAGTATATACATGCGAGGCTTCTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2939
Qy 2821 AATGCCAAATGTATATCAAGAGAGGCTTATAGTGTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2880
Db 2940 AATGCCAAATGTATATCAAGAGAGGCTTATAGTGTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTT 2999
Qy 2881 AAGCAAACTGACATCTTACTCCAAATTAACATGAGCTTTTACAAAACCCATATATGATA 2940
Db 3000 AAGCAAACTGACATCTTACTCCAAATTAACATGAGCTTTTACAAAACCCATATATGATA 3059

QY 2941 CCACCACTTTTCCATCAGTATCTGTAACTAAATGTAAAGAAAAATCTGCTAGAG 3000
| | | | |
Db 3060 CCACCACTTTTCCATCAGTATCTGTAACTAAATGTAAAGAAAAATCTGCTAGAG 3119
| | | | |
QY 3001 GAAACCTTGGAGAACATTCATGTCCACTGGAAGAAATGGGAAATGAGAACTTCCA 3060
| | | | |
Db 3120 GAAACCTTGGAGAACATTCATGTCCACTGGAAGAAATGGGAAATGAGAACTTCCA 3179
| | | | |
QY 3061 AGTACAGTACACAAATAGCCGTAAATACATTAAGAAAAATGTTTTTAAAGACCAAGC 3120
| | | | |
Db 3180 AGTACAGTACACAAATAGCCGTAAATACATTAAGAAAAATGTTTTTAAAGACCAAGC 3239
| | | | |
QY 3121 TCAAGCAATATTAATGAAGTACGTTCCAGTAAATGAAGTGGCTCCAGTATTAATGA 3180
| | | | |
Db 3240 TCAAGCAATATTAATGAAGTACGTTCCAGTAAATGAAGTGGCTCCAGTATTAATGA 3299
| | | | |
QY 3181 ATAGTTCAGTATGAAGAACATTCACAGAACTAGGTAGAAACAGAGGGCCAAATTTG 3240
| | | | |
Db 3300 ATAGTTCAGTATGAAGAACATTCACAGAACTAGGTAGAAACAGAGGGCCAAATTTG 3359
| | | | |
QY 3341 AATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGTCTATTAACAAAGTCTCTGGA 3300
| | | | |
Db 3360 AATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGTCTATTAACAAAGTCTCTGGA 3419
| | | | |
QY 3301 AGTAAATGTAAAGCATCTGGAATTAAGAAAGCAAGATATGAAGAACTAGTACACTGT 3360
| | | | |
Db 3420 AGTAAATGTAAAGCATCTGGAATTAAGAAAGCAAGATATGAAGAACTAGTACACTGT 3479
| | | | |
QY 3361 AATACAGATTTCTGCTCATCTGATTCAGATTAAGAAACAGCTATAGGAAGTGT 3420
| | | | |
Db 3480 AATACAGATTTCTGCTCATCTGATTCAGATTAAGAAACAGCTATAGGAAGTGT 3539
| | | | |
QY 3421 CATGCACTCAGGTTTGTTCAGAGACCTGATGACCTGTTAGATGATGGTAAATTAAG 3480
| | | | |
Db 3540 CATGCACTCAGGTTTGTTCAGAGACCTGATGACCTGTTAGATGATGGTAAATTAAG 3599
| | | | |
QY 3481 GAAATATCTACTTTTGTGGAAGAAATGACATTAAGAAAGTGTGCTGTTTTAGCAAAAGC 3540
| | | | |
Db 3600 GAAATATCTACTTTTGTGGAAGAAATGACATTAAGAAAGTGTGCTGTTTTAGCAAAAGC 3659
| | | | |
QY 3541 GTCCAGAAAGAGAGAGCTTACAGAGAGTCTTACCCATACATTTGGCTCAG 3600
| | | | |
Db 3660 GTCCAGAAAGAGAGAGCTTACAGAGAGTCTTACCCATACATTTGGCTCAG 3719
| | | | |
QY 3601 GGTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTAGTGGAGAT 3660
| | | | |
Db 3720 GGTACCGAAGAGGGGCCAAGAAATTAAGTCTCAGAGAGAACTTATCTAGTGGAGAT 3779
| | | | |
QY 3661 GAAAGAGCTCCCTGCTTCCAACTGTTATTTGTAAGTAAACAAATATCTCTCAG 3720
| | | | |
Db 3780 GAAAGAGCTCCCTGCTTCCAACTGTTATTTGTAAGTAAACAAATATCTCTCAG 3839
| | | | |
QY 3721 TCTACTAGGATACACCGTGTCTACAGAGTGTCTGTAGAAACACAGAGAGAAATTA 3780
| | | | |
Db 3840 TCTACTAGGATACACCGTGTCTACAGAGTGTCTGTAGAAACACAGAGAGAAATTA 3899
| | | | |
QY 3781 TTATCATTTGAAGATTAAGTAAATGACTGCAATTAACAGTAAATTTGGCAAAAGGCATCT 3840
| | | | |
Db 3900 TTATCATTTGAAGATTAAGTAAATGACTGCAATTAACAGTAAATTTGGCAAAAGGCATCT 3959
| | | | |
QY 3841 CAGGAACATCAGCTTAGAGAGAAACAAATGTTCTGCTAGCTTTTCTTCCACAGTGC 3900
| | | | |
Db 3960 CAGGAACATCAGCTTAGAGAGAAACAAATGTTCTGCTAGCTTTTCTTCCACAGTGC 4019
| | | | |
QY 3901 AGTGAATTTGGAAGACTTACAGCAAAATCAAAACACCCAGATCTTTTCTTGGTGGTCT 3960
| | | | |
Db 4020 AGTGAATTTGGAAGACTTACAGCAAAATCAAAACACCCAGATCTTTTCTTGGTGGTCT 4079
| | | | |
QY 3961 TCCAAACAAATGAGGATCTGGAAGCCAGGAGATTTGGTCTGAGTACAGAAAGAAATG 4020
| | | | |
Db 4080 TCCAAACAAATGAGGATCTGGAAGCCAGGAGATTTGGTCTGAGTACAGAAAGAAATG 4139
| | | | |
QY 4021 GTTTCAGATGATGAAGAAAGAGAGGGCTTGGAAAGAAATTAATCAAGAGAGCAAGC 4080
| | | | |

Db 4140 GTTTCAGATGATGAAGAAAGAGAGGGCTTGGAAAGAAATTAATCAAGAGAGCAAGC 4199
| | | | |
QY 4081 ATGGAATTAACCTTAGTGAAGCAGCATCTGGGTGTGAGATGAAGAAAGGCTCTGAA 4140
| | | | |
Db 4200 ATGGAATTAACCTTAGTGAAGCAGCATCTGGGTGTGAGATGAAGAAAGGCTCTGAA 4259
| | | | |
QY 4141 GACTGCTAGGGCTATTCCTCAGAGTACATTTTAACCACTCAGAGAGGATACATG 4200
| | | | |
Db 4260 GACTGCTAGGGCTATTCCTCAGAGTACATTTTAACCACTCAGAGAGGATACATG 4319
| | | | |
QY 4201 CAACATTAACCTGATTAACCTCCAGAGAAATGGCTGACATGAAGCTGTGTAGAACAG 4260
| | | | |
Db 4320 CAACATTAACCTGATTAACCTCCAGAGAAATGGCTGACATGAAGCTGTGTAGAACAG 4379
| | | | |
QY 4261 CATGGAGCCAGCCCTTCAACAGCTACCCCTCATATAGTACCTTCTGCCCCAG 4320
| | | | |
Db 4380 CATGGAGCCAGCCCTTCAACAGCTACCCCTCATATAGTACCTTCTGCCCCAG 4439
| | | | |
QY 4321 GACTGCGAAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAACCTCAGAAAAAT 4380
| | | | |
Db 4440 GACTGCGAAATTCAGAAACAAAGCAGATCAGAAAAAGCAGTATTAACCTCAGAAAAAT 4499
| | | | |
QY 4381 AGTGAATACCTATTAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAGTTTGAAGTCT 4440
| | | | |
Db 4500 AGTGAATACCTATTAAGCCAGAAATCCAGAAAGCCCTTCTGCTGACAGTTTGAAGTCT 4559
| | | | |
QY 4441 GCAGATAGTCTTACAGTAAATTAAGAAACAGAGAGTGAAGAGTATCCCTCTTAA 4500
| | | | |
Db 4560 GCAGATAGTCTTACAGTAAATTAAGAAACAGAGAGTGAAGAGTATCCCTCTTAA 4619
| | | | |
QY 4501 TGCCCATATTAAGATGATAGGTGTGATGACAGTGTCTCTGGAAGTCTTCAAGATGA 4560
| | | | |
Db 4620 TGCCCATATTAAGATGATAGGTGTGATGACAGTGTCTCTGGAAGTCTTCAAGATGA 4679
| | | | |
QY 4561 AACTACCATCTCAAGAGAGAGTCAATTAAGTGTGATGAGAGAGCAAGCCTGGAA 4620
| | | | |
Db 4680 AACTACCATCTCAAGAGAGAGTCAATTAAGTGTGATGAGAGAGCAAGCCTGGAA 4739
| | | | |
QY 4621 GAGTGTGGCCACAGATTTGAGAGAAACATCTTACTTGGCAAGAGCAAGATCTAGAGGA 4680
| | | | |
Db 4740 GAGTGTGGCCACAGATTTGAGAGAAACATCTTACTTGGCAAGAGCAAGATCTAGAGGA 4799
| | | | |
QY 4681 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGTGATGACCTGAATGTATCTTCT 4740
| | | | |
Db 4800 ACCCTTACCTGGAATCTGGAATCAGCTCTTCTGTGATGACCTGAATGTATCTTCT 4859
| | | | |
QY 4741 GAAAGACAGAGCCAGAGTACGTCGTGTTGGCAACATACCATCTTCAACCTCGAATG 4800
| | | | |
Db 4860 GAAAGACAGAGCCAGAGTACGTCGTGTTGGCAACATACCATCTTCAACCTCGAATG 4919
| | | | |
QY 4801 AAAGTCCCAATTAAGAAATTCAGAAATCTGCCCCAGAGTCCAGTCTGCTCACTACT 4860
| | | | |
Db 4920 AAAGTCCCAATTAAGAAATTCAGAAATCTGCCCCAGAGTCCAGTCTGCTCACTACT 4979
| | | | |
QY 4861 GATACCTGCTGGTATTAATGCAATGGAAGAAAGTGTGACAGGAGAAACCAAGATTTGACA 4920
| | | | |
Db 4980 GATACCTGCTGGTATTAATGCAATGGAAGAAAGTGTGACAGGAGAAACCAAGATTTGACA 5039
| | | | |
QY 4921 GCTTCAACAGAAAGGCTCAACAAAGAAATGCCATGTTGGTGGCTGACCCAGAA 4980
| | | | |
Db 5040 GCTTCAACAGAAAGGCTCAACAAAGAAATGCCATGTTGGTGGCTGACCCAGAA 5099
| | | | |
QY 4981 GAATTTATGCTGCTGATCAAGTTCAGAGAAACACCAATCACTTAACTAATCTAAT 5040
| | | | |
Db 5100 GAATTTATGCTGCTGATCAAGTTCAGAGAAACACCAATCACTTAACTAATCTAAT 5159
| | | | |
QY 5041 ACTGAAGAGACTACTCATGTTGTTATGAAGAAACAGATGCTGATTTGTGTGAACGACA 5100
| | | | |
Db 5160 ACTGAAGAGACTACTCATGTTGTTATGAAGAAACAGATGCTGATTTGTGTGAACGACA 5219
| | | | |
QY 5101 CTGAATATTTTCTAGAAATTTGGGAGGAAATGGTATGTAGCTATTTCTGGGTGACC 5160
| | | | |

Db 5220 CTGAATATTCTTGTAGGAATTCGGGAGAGAAATGGGTAGTACTATTCTGGGTGACC 5279
 QY 5161 CAGCTCTTTAAAGAAAGAAAAATCTCAATAGAGATATTTTGAAGTCAGAGAGATGTG 5220
 Db 5280 CAGCTCTTTAAAGAAAGAAAAATCTCAATAGAGATATTTTGAAGTCAGAGAGATGTG 5339
 QY 5221 GTCATATGGAAGAAACCAAGGTCACAAAGCGAGCAAGAGAAATCCAGAGAGAAATG 5280
 Db 5340 GTCATATGGAAGAAACCAAGGTCACAAAGCGAGCAAGAGAAATCCAGAGAGAAATG 5339
 QY 5281 TTCAGGGGGCTAGAAATCTGTGTATGGGCGCTTCCACCAATGCCCCAGATCAACTG 5340
 Db 5400 TTCAGGGGGCTAGAAATCTGTGTATGGGCGCTTCCACCAATGCCCCAGATCAACTG 5459
 QY 5341 GAATGATGTGTACAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5400
 Db 5460 GAATGATGTGTACAGCTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5519
 QY 5401 GGCACAGGTGTCCACCAATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5460
 Db 5520 GGCACAGGTGTCCACCAATTTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5579
 QY 5461 TTCATGCAATTTGGGAGATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5520
 Db 5580 TTCATGCAATTTGGGAGATGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGT 5639
 QY 5521 AGGTACACTCTTACGATGTCGACGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 5580
 Db 5640 AGGTACACTCTTACGATGTCGACGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAGAG 5699
 QY 5581 AGCCACTAC 5589
 Db 5700 AGCCACTAC 5708

RESULT 14
 US-08-850-727-1
 Sequence 1, Application US/08850727
 Patent No. 6162897

GENERAL INFORMATION:

APPLICANT: Skolnick, Mark H.
 APPLICANT: Goldfar, David E.
 APPLICANT: Miki, Yoshio
 APPLICANT: Swenson, Jeff
 APPLICANT: Kamb, Alexander
 APPLICANT: Harshman, Keith D.
 APPLICANT: Shattuck-Eidens, Donna M.
 APPLICANT: Tavligian, Sean V.
 APPLICANT: Wiseman, Roger W.
 APPLICANT: Futreal, P. Andrew
 TITLE OF INVENTION: 17q-linked Breast and Ovarian Cancer
 TITLE OF INVENTION: Susceptibility Gene
 NUMBER OF SEQUENCES: 85
 CORRESPONDENCE ADDRESSES:
 ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP
 STREET: 1201 New York Avenue, N.W., Suite 1000
 CITY: Washington
 STATE: DC
 COUNTRY: USA
 ZIP: 20005

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
 COMPUTER: IBM PC compatible
 OPERATING SYSTEM: PC-DOS/MS-DOS
 SOFTWARE: PatentIn Release #1.0, Version #1.30
 CURRENT APPLICATION DATA:
 APPLICATION NUMBER: US/08/850,727
 FILING DATE:
 CLASSIFICATION:
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/483,554
 FILING DATE: 07-JUN-1995
 PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/348,824
 FILING DATE: 29-NOV-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/308,104
 FILING DATE: 16-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/300,266
 FILING DATE: 02-SEP-1994
 PRIOR APPLICATION DATA:
 APPLICATION NUMBER: US 08/289,221
 FILING DATE: 12-AUG-1994
 ATTORNEY/AGENT INFORMATION:
 NAME: Imnen, Jeffrey L.
 REGISTRATION NUMBER: 28,957
 REFERENCE/DOCKET NUMBER: 24884-109347
 TELECOMMUNICATION INFORMATION:
 TELEPHONE: 202-962-4810
 TELEFAX: 202-962-8300
 INFORMATION FOR SEQ ID NO: 1:
 SEQUENCE CHARACTERISTICS:
 LENGTH: 5914 base pairs
 TYPE: nucleic acid
 STRANDEDNESS: double
 MOLECULE TYPE: cdna
 HYPOTHEICAL: NO
 ANTI-SENSE: NO
 ORIGINAL SOURCE:
 ORGANISM: Homo sapiens
 FEATURE:
 NAME/KEY: CDS
 LOCATION: 120..5708
 US-08-850-727-1

Query Match 99.9%; Score 5585.8; DB 4; Length 5914;
 Best Local Similarity 100.0%; Pred. No. 0;
 Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGATTTTATCTGCTCTTCCGCTTGAAGAAAGTACAAAATGCTATTAATGCTATGCAAAA 60
 Db 120 ATGATTTTATCTGCTCTTCCGCTTGAAGAAAGTACAAAATGCTATTAATGCTATGCAAAA 179
 QY 61 ATCTTACAGTGTCCATCTGCTGAGTGTGATCAAGAGACCTGCTCCAAAAGTGTGAC 120
 Db 180 ATCTTACAGTGTCCATCTGCTGAGTGTGATCAAGAGACCTGCTCCAAAAGTGTGAC 239
 QY 121 CACATATTTTGCAAATTTTGCATGCTGAACCTTCAACAGAGAAAGGCTTCAAG 180
 Db 240 CACATATTTTGCAAATTTTGCATGCTGAACCTTCAACAGAGAAAGGCTTCAAG 299
 QY 181 TGTCTTTATGTAAAGATGATATACCAAAAGGAGCTTACAGAAAGTACAGATTAGT 240
 Db 300 TGTCTTTATGTAAAGATGATATACCAAAAGGAGCTTACAGAAAGTACAGATTAGT 359
 QY 241 CACTGTTGAAGGATGATGAAGAAATGCTTGTGCTTGTGAGTGTGACAGGTTGGAG 300
 Db 360 CACTGTTGAAGGATGATGAAGAAATGCTTGTGCTTGTGAGTGTGACAGGTTGGAG 419
 QY 301 TATGCAAAAGCTATATTTTGCAGAAAGGAAATTAATCTCTGTAACATCTAAAGAT 360
 Db 420 TATGCAAAAGCTATATTTTGCAGAAAGGAAATTAATCTCTGTAACATCTAAAGAT 479
 QY 361 GAAGTTTATATCATCAAGATATGAGTACAGAAACCGTCCAAAGAGCTTACAGAGT 420
 Db 480 GAAGTTTATATCATCAAGATATGAGTACAGAAACCGTCCAAAGAGCTTACAGAGT 539
 QY 421 GAACCGGAAATGCTCTTGCAGGAAAGAGCTGAGTGTGCAACGCTTAACTTTGA 480
 Db 540 GAACCGGAAATGCTCTTGCAGGAAAGAGCTGAGTGTGCAACGCTTAACTTTGA 599
 QY 481 ACTGTGAGAACTGTGAGGAGCAAGAGCGGATACAACTTCAAAAGAGCTGTCTACATT 540
 Db 600 ACTGTGAGAACTGTGAGGAGCAAGAGCGGATACAACTTCAAAAGAGCTGTCTACATT 659

QY 541 GAATGGGATCTGATTCCTCGAAGATACCGTTAAATAGCACTTATTGCACTGGGA 600
| | | | |
Db 660 GAATGGGATCTGATTCCTCGAAGATACCGTTAAATAGCACTTATTGCACTGGGA 719
QY 601 GATCAAGAAATGTTACAAATACACCCCTCAAGAACACCGAGATGAATCATGTTGATTC 660
| | | | |
Db 720 GATCAAGAAATGTTACAAATACACCCCTCAAGAACACCGAGATGAATCATGTTGATTC 779
QY 661 GCAAAAAAGGCTGCTTGTGAATTTCTGAGAGGATGTAACTAACTGAATCATCA 720
| | | | |
Db 780 GCAAAAAAGGCTGCTTGTGAATTTCTGAGAGGATGTAACTAACTGAATCATCA 839
QY 721 CCCAGTAAATGATTTGACACACCTGAGAAAGCTGACGCTGAGAGGATCCAGAAAAG 780
| | | | |
Db 840 CCCAGTAAATGATTTGACACACCTGAGAAAGCTGACGCTGAGAGGATCCAGAAAAG 899
QY 781 TATAGGGTACTGCTGTTCAAACTGATGAGGACCATGTGGCAAAATCTCATGCC 840
| | | | |
Db 900 TATAGGGTACTGCTGTTCAAACTGATGAGGACCATGTGGCAAAATCTCATGCC 959
QY 841 AGCTCATACAGCATGAGACAGCAGTTTATTACTACTAAAGACAGATGATGTAGA 900
| | | | |
Db 960 AGCTCATACAGCATGAGACAGCAGTTTATTACTACTAAAGACAGATGATGTAGA 1019
QY 901 AAGCTGAATTCCTGTAATAAAAGCAACAGCCTGGCTTAGCAGAGACCAATATACGA 960
| | | | |
Db 1020 AAGCTGAATTCCTGTAATAAAAGCAACAGCCTGGCTTAGCAGAGACCAATATACGA 1079
QY 961 TGGGCTGGAAGTAAAGAAACATGTAATAGGGGACATCCAGCAGAAAAAAGGA 1020
| | | | |
Db 1080 TGGGCTGGAAGTAAAGAAACATGTAATAGGGGACATCCAGCAGAAAAAAGGA 1139
QY 1021 GATCTGAATGCTGATCCCTGTGTGAGAAAAAGAAATGGAATAGCAAAATGCGCATGC 1080
| | | | |
Db 1140 GATCTGAATGCTGATCCCTGTGTGAGAAAAAGAAATGGAATAGCAAAATGCGCATGC 1199
QY 1081 TCAGAGAAATCTTAAGATACCTGGAAGATGTTCTTGTGATTAACCTAAATAGCAGCTTCA 1140
| | | | |
Db 1200 TCAGAGAAATCTTAAGATACCTGGAAGATGTTCTTGTGATTAACCTAAATAGCAGCTTCA 1259
QY 1141 AAGTAAATGAGTGTTCAGAAAGTATGATGAATGTTAGTTCGATGACTCAGATGAT 1200
| | | | |
Db 1260 AAGTAAATGAGTGTTCAGAAAGTATGATGAATGTTAGTTCGATGACTCAGATGAT 1319
QY 1201 GGGGAGTCTGAATCAAAATGCCAAAGTACGTATGATGACGCTTAAATAGAGTAGAT 1260
| | | | |
Db 1320 GGGGAGTCTGAATCAAAATGCCAAAGTACGTATGATGACGCTTAAATAGAGTAGAT 1379
QY 1261 GAATATTCTGTTCTCGAGAAAAATAGATTAGTGGGACAGATCCATGAGGCTTTA 1320
| | | | |
Db 1380 GAATATTCTGTTCTCGAGAAAAATAGATTAGTGGGACAGATCCATGAGGCTTTA 1439
QY 1321 ATATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATTAATATTGAAGACAAATA 1380
| | | | |
Db 1440 ATATGTAAAGTGAAGAGTTCACCTCCAAATCAGTAGAGATTAATATTGAAGACAAATA 1499
QY 1381 TTTGGGAAAACCTTCGGAAGAGCAAGCCTCCCAACTTAAGCAGTGAATCTGAAT 1440
| | | | |
Db 1500 TTTGGGAAAACCTTCGGAAGAGCAAGCCTCCCAACTTAAGCAGTGAATCTGAAT 1559
QY 1441 CTAAATTAAGAGATTTGTTAGTGAAGCAGACAGATAATACAAAGGCGTCCCTCAAAAT 1500
| | | | |
Db 1560 CTAAATTAAGAGATTTGTTAGTGAAGCAGACAGATAATACAAAGGCGTCCCTCAAAAT 1619
QY 1501 AAATTAAGGCTAAAGAGACCTACATCAGGCTTCACTCTGAGATTTTATCAAGAAA 1560
| | | | |
Db 1620 AAATTAAGGCTAAAGAGACCTACATCAGGCTTCACTCTGAGATTTTATCAAGAAA 1679
QY 1561 GCAGATTTGGCAGTTCAAAAGACTCTGAAAATGATTAATCAGGGAATACCAACGAG 1620
| | | | |
Db 1680 GCAGATTTGGCAGTTCAAAAGACTCTGAAAATGATTAATCAGGGAATACCAACGAG 1739

QY 1621 CAGAAATGCTCAAGTGAATATTAATAGTGTCTAGAGAAATAAACAAAGGTGAT 1680
| | | | |
Db 1740 CAGAAATGCTCAAGTGAATATTAATAGTGTCTAGAGAAATAAACAAAGGTGAT 1799
QY 1681 TCTATTCAGAAATGAAAAATCCTTAACCAATTAATACCTGCAAAAAAGTCTGCTTC 1740
| | | | |
Db 1800 TCTATTCAGAAATGAAAAATCCTTAACCAATTAATACCTGCAAAAAAGTCTGCTTC 1859
QY 1741 AAAAGAAAGCTGAAGCTATTAAGCAGCAGTAAATGCAATATGAACTGAATTAATATC 1800
| | | | |
Db 1860 AAAAGAAAGCTGAAGCTATTAAGCAGCAGTAAATGCAATATGAACTGAATTAATATC 1919
QY 1801 CACAATTAAGAAAGCCTTAAAGAAATAGCTGAGAGAAAGTCTTACCAGGCAATTT 1860
| | | | |
Db 1920 CACAATTAAGAAAGCCTTAAAGAAATAGCTGAGAGAAAGTCTTACCAGGCAATTT 1979
QY 1861 CATGGCTTGAAGTGTAGTGAAGAAATGAATAGCCACCTAATGTTAGTGAATTCGA 1920
| | | | |
Db 1980 CATGGCTTGAAGTGTAGTGAAGAAATGAATAGCCACCTAATGTTAGTGAATTCGA 2039
QY 1921 ATTGATAGTGTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCGAGTC 1980
| | | | |
Db 2040 ATTGATAGTGTCTAGCAGTGAAGAGATTAAGAAAAAAGTACAAACCAATGCGAGTC 2099
QY 1981 AGGCACACAGAAACCTTCAACTCATGGAAGTAAAGAACCTGCACTGAGCCAGAGAG 2040
| | | | |
Db 2100 AGGCACACAGAAACCTTCAACTCATGGAAGTAAAGAACCTGCACTGAGCCAGAGAG 2159
QY 2041 AGTAAACAGCCAAATGAAACAGACAGTAAAGATGACAGTGAATCTTCCAGAGCTG 2100
| | | | |
Db 2160 AGTAAACAGCCAAATGAAACAGACAGTAAAGATGACAGTGAATCTTCCAGAGCTG 2219
QY 2101 AAGTTAACAAATGCACTGCTGTTCTTAAAGTTCCTAAATACCAATGCACTTAAGAA 2160
| | | | |
Db 2220 AAGTTAACAAATGCACTGCTGTTCTTAAAGTTCCTAAATACCAATGCACTTAAGAA 2279
QY 2161 TTTGTCAATCCTAGCCTTCCAGAGAAAGAAAGAAAGAAAGAAAGTAAAGTAAAGT 2220
| | | | |
Db 2280 TTTGTCAATCCTAGCCTTCCAGAGAAAGAAAGAAAGAAAGTAAAGTAAAGTAAAGT 2339
QY 2221 TCTAATTAATGCTGAAGAACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTGAACAT 2280
| | | | |
Db 2340 TCTAATTAATGCTGAAGAACCCCAAGATCTCATGTTAAGTGAAGAAAGGTTTGAACAT 2399
QY 2281 GAAGATCTGTAGAGAGTAGCAGTATTTCACTGTTACCTGTTATGTCACCTCAG 2340
| | | | |
Db 2400 GAAGATCTGTAGAGAGTAGCAGTATTTCACTGTTACCTGTTATGTCACCTCAG 2459
QY 2341 GAAAGTATCTGCTTACTGGAAGTGAAGCTAGGGAAGGCAAAAACAGAAACAAATPAA 2400
| | | | |
Db 2460 GAAAGTATCTGCTTACTGGAAGTGAAGCTAGGGAAGGCAAAAACAGAAACAAATPAA 2519
QY 2401 TGTGTAGATCAGTGTGAGCATTTTGAAGAACCCCAAGGAGCTAATTCATGTTTCCAAA 2460
| | | | |
Db 2520 TGTGTAGATCAGTGTGAGCATTTTGAAGAACCCCAAGGAGCTAATTCATGTTTCCAAA 2579
QY 2461 GATTAATGAATTAAGACAGAAAGCTTTAATGATTCATTTGGAGATGAAGTTAACCAAGT 2520
| | | | |
Db 2580 GATTAATGAATTAAGACAGAAAGCTTTAATGATTCATTTGGAGATGAAGTTAACCAAGT 2639
QY 2521 CGGGAACCAAGCAGTAAGAAATGGAAGAAAGAACTTATGCTCAGTATTTGCAAGATPAC 2580
| | | | |
Db 2640 CGGGAACCAAGCAGTAAGAAATGGAAGAAAGAACTTATGCTCAGTATTTGCAAGATPAC 2699
QY 2581 TTCAAGGTTTCAAGGCCAGTCATTTGCTGTTTCAATCCAGAAATGCAAGAGAG 2640
| | | | |
Db 2700 TTCAAGGTTTCAAGGCCAGTCATTTGCTGTTTCAATCCAGAAATGCAAGAGAG 2759
QY 2641 GAATGTGCAACATTTCTGCCCACCTGCTTAAAGAAACAAAGTCCAAAGTCACT 2700
| | | | |
Db 2760 GAATGTGCAACATTTCTGCCCACCTGCTTAAAGAAACAAAGTCCAAAGTCACT 2819
QY 2701 TTTGAATGTGAACAAAGAAAGAAATCAAGGAAGAAAGATGATTAATCAAGCCTGTA 2760

Db	2820	TTTGATGTTGAAACAAAGGAAGAAATCAAGAAAGAAATGAGTCAATATCAAGCTCTA	2879
QY	2761	CAGACAGTTAATATCACTGCAAGGCTTTCCTGTGGTTCAGAAAGATAACCAAGTTGAT	2820
Db	2880	CAGACAGTTAATATCACTGCAAGGCTTTCCTGTGGTTCAGAAAGATAACCAAGTTGAT	2939
QY	2821	AATGCCAATGTAGTATCAAAAGAGGCTCTAGTTTTGCTATCATCTCACTTCAGAGGC	2880
Db	2940	AATGCCAATGTAGTATCAAAAGAGGCTCTAGTTTTGCTATCATCTCACTTCAGAGGC	2999
QY	2881	AACGAAATGTGAGTCATTAATCCAAATTAACATGAGCTTTTCAAAACCCATATCGTATA	2940
Db	3000	AACGAAATGTGAGTCATTAATCCAAATTAACATGAGCTTTTCAAAACCCATATCGTATA	3059
QY	2941	CCACACATTTTCCCATCAAGTCATTTGTGTAAACTAAATGTAGAAAATCTGCTAAG	3000
Db	3060	CCACACATTTTCCCATCAAGTCATTTGTGTAAACTAAATGTAGAAAATCTGCTAAG	3119
QY	3001	GAAGAACTTGGAGAACATTCATGTCACCTGAAGAGAAATGGGAATGAGAACATTTCCA	3060
Db	3120	GAAGAACTTGGAGAACATTCATGTCACCTGAAGAGAAATGGGAATGAGAACATTTCCA	3179
QY	3061	AGTACAGTGAGACACAAATTAGCCGTATATACCTTAGAGAAATGTTTTTAAAGAACGACG	3120
Db	3180	AGTACAGTGAGACACAAATTAGCCGTATATACCTTAGAGAAATGTTTTTAAAGAACGACG	3239
QY	3121	TCAGCAATATTAATGAAGTGGTTCCTGCTATATGAAGTGGGCTCCAGATTAATGA	3180
Db	3240	TCAGCAATATTAATGAAGTGGTTCCTGCTATATGAAGTGGGCTCCAGATTAATGA	3299
QY	3181	ATAGGTTCCAGTGTGAAGAACATTCMAAGCAAGTAGAGTAGAAACAGAGGCCCAAAATTG	3240
Db	3300	ATAGGTTCCAGTGTGAAGAACATTCMAAGCAAGTAGAGTAGAAACAGAGGCCCAAAATTG	3359
QY	3241	AATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGGCTCTATPAAACAAAGTCTTCGGA	3300
Db	3360	AATGCTATGCTTAGATTAGGGGTTTTGCAACCTGAGGCTCTATPAAACAAAGTCTTCGGA	3419
QY	3301	AGTATGTGTAAGCAATCCGAAATPAAAAAGCAAGATPAGAAAGTATGTCACACGCTT	3360
Db	3420	AGTATGTGTAAGCAATCCGAAATPAAAAAGCAAGATPAGAAAGTATGTCACACGCTT	3479
QY	3361	AATPACAGATTTCTCTCCATATCTGATATTCAGATTAAGTACAGACGCTATGGAAATGAT	3420
Db	3480	AATPACAGATTTCTCTCCATATCTGATATTCAGATTAAGTACAGACGCTATGGAAATGAT	3539
QY	3421	CATGCATCTCAGGTTTTGTTCTGAGACACCTGATGACCTGTAGATGATGTGAATAAAG	3480
Db	3540	CATGCATCTCAGGTTTTGTTCTGAGACACCTGATGACCTGTAGATGATGTGAATAAAG	3599
QY	3481	GAAATATCTACTTTTGTGCGAAATAGACATTAAAGAAAGTTCTGCTTTTAGCAAAAAGC	3540
Db	3600	GAAATATCTACTTTTGTGCGAAATAGACATTAAAGAAAGTTCTGCTTTTAGCAAAAAGC	3659
QY	3541	GTTCCAGAAAGAGAGCTTAGAGGAGAGTCCTAGGCTTTCACCCATATACATTTGGCTCAG	3600
Db	3660	GTTCCAGAAAGAGAGCTTAGAGGAGAGTCCTAGGCTTTCACCCATATACATTTGGCTCAG	3719
QY	3601	GGTTCACGAAAGAGGGGCCAAGAAATTAGAGTCTCAAGAGAACTTATCTAGTAGAGAT	3660
Db	3720	GGTTCACGAAAGAGGGGCCAAGAAATTAGAGTCTCAAGAGAACTTATCTAGTAGAGAT	3779
QY	3661	GAAAGAGTCCCTCCTTCCAAACACTGTGTATTGTGTAAAGTAAACATATACCTTCTCAG	3720
Db	3780	GAAAGAGTCCCTCCTTCCAAACACTGTGTATTGTGTAAAGTAAACATATACCTTCTCAG	3839
QY	3721	TCTACTAGGAGTACACCGTTGCTACACGAGTGTGCTCTAAGAACACAGAGAGCAATTTA	3780
Db	3840	TCTACTAGGAGTACACCGTTGCTACACGAGTGTGCTCTAAGAACACAGAGAGCAATTTA	3899
QY	3781	TTATCATTTGAAGATAGCTTAAATGACTGCAGTAACCAAGATTAATTTGGCAAGGCACTCT	3840

Db	3900	TTATCATTTGAAGATAAGCTTTAATGACTTCGAGTAACAGGTAATATTG6CAAAAGGACACT	3959
QY	3841	CAGGAACATCATCCTAGTAGAGGAAACAAATGTTCTGCTAGCTGTTTCTTCAACAGTGC	3900
Db	3960	CAGGAAACATCACTTAGTAGAGGAAACAAATGTTCTGCTAGCTGTTTCTTCAACAGTGC	4019
QY	3901	AGTGAATTGGAAAGACTTACTGCAAAATCAAAACACCCAGAGATCCTTCTTGATGTTGTTCT	3960
Db	4020	AGTGAATTGGAAAGACTTACTGCAAAATCAAAACACCCAGAGATCCTTCTTGATGTTGTTCT	4079
QY	3961	TCCAAACAAATAGAGCATCAGTCTGAAAGCCAGAGAGTGTGCTGAGTACAAAGAAATG	4020
Db	4080	TCCAAACAAATAGAGCATCAGTCTGAAAGCCAGAGAGTGTGCTGAGTACAAAGAAATG	4139
QY	4021	GTTTCAGATGATGAAAGAAAGGAAACGGGCTTGGAAAGAAATTAATCAAGAGACAAAGC	4080
Db	4140	GTTTCAGATGATGAAAGAAAGGAAACGGGCTTGGAAAGAAATTAATCAAGAGACAAAGC	4199
QY	4081	ATGATTTCAAACTTAGGTGAAGCAGACATCTGGGTGTGAGTGAAGAAACAAGGCTCTGAA	4140
Db	4200	ATGATTTCAAACTTAGGTGAAGCAGACATCTGGGTGTGAGTGAAGAAACAAGGCTCTGAA	4259
QY	4141	GACTGCTCAGGGCTTCTCTCTCAGAGTACATTTTAACCACTCAGCAGAGGATATCCATG	4200
Db	4260	GACTGCTCAGGGCTTCTCTCTCAGAGTACATTTTAACCACTCAGCAGAGGATATCCATG	4319
QY	4201	CAACATTAACCTGATTTAAAGCTCAGCAGGAAATGGCTGAATAGAAAGCTGTGTTAGAACG	4260
Db	4320	CAACATTAACCTGATTTAAAGCTCAGCAGGAAATGGCTGAATAGAAAGCTGTGTTAGAACG	4379
QY	4261	CATGGGAGCCAGGCTTCTTACAGCTAACCCCTTCATCATTAAGTGACTCTTCTGCCCTTAG	4320
Db	4380	CATGGGAGCCAGGCTTCTTACAGCTAACCCCTTCATCATTAAGTGACTCTTCTGCCCTTAG	4439
QY	4321	GACCTGCGAAATCCAGAAACAAAGCAGCATCAGAAAGACATTTACTTCCACAGAAAGT	4380
Db	4440	GACCTGCGAAATCCAGAAACAAAGCAGCATCAGAAAGACATTTACTTCCACAGAAAGT	4499
QY	4381	AGTGAATACCCGTAATAGGCGAGAAATCCAAAGGCTTGTGCTGACAACTTGAGAGTGCAT	4440
Db	4500	AGTGAATACCCGTAATAGGCGAGAAATCCAAAGGCTTGTGCTGACAACTTGAGAGTGCAT	4559
QY	4441	GCAGATAGTTTACACAGTAAATAATTAAGACAGAGGTGGAAGGTCACTCCCTCTTAAA	4500
Db	4560	GCAGATAGTTTACACAGTAAATAATTAAGACAGAGGTGGAAGGTCACTCCCTCTTAAA	4619
QY	4501	TGCCCATCATTAAGATGATAGTGGTACATGCACAGTGTCTGTGGAGTCTTCCAGAAATGA	4560
Db	4620	TGCCCATCATTAAGATGATAGTGGTACATGCACAGTGTCTGTGGAGTCTTCCAGAAATGA	4679
QY	4561	AACATACCATTCAGAGAGAGGAGCTCATTAAGTGTGTGATGTGGAGAGCAACACTGGAA	4620
Db	4680	AACATACCATTCAGAGAGAGGAGCTCATTAAGTGTGTGATGTGGAGAGCAACACTGGAA	4739
QY	4621	GAGTCTGGGGCAGACAGATTTGACGGAAACATCTTACTTGCCAAAGCAAGATCTAGAGGA	4680
Db	4740	GAGTCTGGGGCAGACAGATTTGACGGAAACATCTTACTTGCCAAAGCAAGATCTAGAGGA	4799
QY	4681	ACCCCTTACCTGGAATCTGGAATCAGCCTCTTCTGTGATGACCCCTGAATCTGATCTTCT	4740
Db	4800	ACCCCTTACCTGGAATCTGGAATCAGCCTCTTCTGTGATGACCCCTGAATCTGATCTTCT	4859
QY	4741	GAAACAGAGCCCAAGAGTCAAGTCCGTTGGCAACATACCATTTCAACCTCTGCATG	4800
Db	4860	GAAACAGAGCCCAAGAGTCAAGTCCGTTGGCAACATACCATTTCAACCTCTGCATG	4919
QY	4801	AAAGTTCCCAATTTGAAGTTGACAGAAATCTCCAGAGTCCAGTGTGCTGCATACACT	4860
Db	4920	AAAGTTCCCAATTTGAAGTTGACAGAAATCTCCAGAGTCCAGTGTGCTGCATACACT	4979
QY	4861	GATACCTGCTGGGTATTAATGCAATGGAAGAAAGTGTGACAGAGGAAAGCCAGAAATTGAC	4920
Db	4980	GATACCTGCTGGGTATTAATGCAATGGAAGAAAGTGTGACAGAGGAAAGCCAGAAATTGAC	5039

QY	4921	GCTTCAACAGAAAGGGCTCAACAAAAGATGTCATGATGGGTGCTGGCTACCCACGAA	4980
Db	5040	GCTTCAACAGAAAGGGCTCAACAAAAGATGTCATGATGGGTGCTGGCTACCCACGAA	5099
QY	4981	GAATTTATGCTGCTGTACAAAGTTTCCAGAAAACCCACATCACTTTAACTAATCTAAT	5040
Db	5100	GAATTTATGCTGCTGTACAAAGTTTCCAGAAAACCCACATCACTTTAACTAATCTAAT	5159
QY	5041	ACTGAAGAGCTACTACATGTTGTTATGAAAACAGTCTGATGTTGTGTGGAACGGCA	5100
Db	5160	ACTGAAGAGCTACTACATGTTGTTATGAAAACAGTCTGATGTTGTGTGGAACGGCA	5219
QY	5101	CTGAATATTTTCTTGTAGAAATTCGCGAGAGAAAATGGATGTTAGCTATTTCTGGGTGAC	5160
Db	5220	CTGAATATTTTCTTGTAGAAATTCGCGAGAGAAAATGGATGTTAGCTATTTCTGGGTGAC	5279
QY	5161	CAGTCTATTAAAGAAAGAAAATGCTGTAATGAGCATGATTTTGAAGTCCAGAGAGATGTG	5220
Db	5280	CAGTCTATTAAAGAAAGAAAATGCTGTAATGAGCATGATTTTGAAGTCCAGAGAGATGTG	5339
QY	5221	GTCATATGGAAGAAAACCCACCAAGTCCAAAGCGAGCAGAGAAATCCAGAGCAGAAAAGTC	5280
Db	5340	GTCATATGGAAGAAAACCCACCAAGTCCAAAGCGAGCAGAGAAATCCAGAGCAGAAAAGTC	5399
QY	5281	TTCAAGGGGGCTAGAAAATCTGTTCATGAGGCCCTTACCAACATGCCACAGATCAACTG	5340
Db	5400	TTCAAGGGGGCTAGAAAATCTGTTCATGAGGCCCTTACCAACATGCCACAGATCAACTG	5459
QY	5341	GAATGATGATGATACAGCTGTGTGTGCTTCTGTGTGTGAAGAGACCTTATCACTACCCCT	5400
Db	5460	GAATGATGATGATACAGCTGTGTGTGCTTCTGTGTGTGAAGAGACCTTATCACTACCCCT	5519
QY	5401	GGCAGAGGTGTCACCCCAATGTGGTGTGTGAGCAAGATGGCTGTGACAGAGCAAAATGCG	5460
Db	5520	GGCAGAGGTGTCACCCCAATGTGGTGTGTGAGCAAGATGGCTGTGACAGAGCAAAATGCG	5579
QY	5461	TTCCATGCAATTTGGGACAGATGTGTGAGGACACCTGTGTGTGACCCAGAGATGGGTGTGAC	5520
Db	5580	TTCCATGCAATTTGGGACAGATGTGTGAGGACACCTGTGTGTGACCCAGAGATGGGTGTGAC	5639
QY	5521	AGTGTAGACATCTTACCAAGTGGCAGAGAGTGCACACCTTACCTGATATCCCCAGATCCCCAC	5580
Db	5640	AGTGTAGACATCTTACCAAGTGGCAGAGAGTGCACACCTTACCTGATATCCCCAGATCCCCAC	5699
QY	5581	AGCCACCTAC 5589	
Db	5700	AGCCACCTAC 5708	
RESULT 15			
PCT-US95-10202-1			
Sequence 1, Application PC/TUS9510202			
GENERAL INFORMATION:			
APPLICANT: Shattuck-Eidens, Donna M.			
APPLICANT: Simard, Jacques			
APPLICANT: Eml, Mitsuru			
APPLICANT: Nakamura, Yusuke			
APPLICANT: Durocher, Francine			
TITLE OF INVENTION: In Vivo Mutations and Polymorphisms			
TITLE OF INVENTION: In the 17q-Linked Breast and Ovarian Cancer			
NUMBER OF SEQUENCES: 85			
CORRESPONDENCE ADDRESS:			
ADDRESSEE: Venable, Baetjer, Howard & Civiletti, LLP			
STREET: 1201 New York Avenue, N.W., Suite 1000			
CITY: Washington			
STATE: DC			
COUNTRY: USA			
ZIP: 20005			
COMPUTER READABLE FORM:			
MEDIUM TYPE: Floppy disk			
COMPUTER: IBM PC compatible			

```

OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/10202
FILING DATE:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 07-JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/409,305
FILING DATE: 24-MAR-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/348,824
FILING DATE: 29-NOV-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08-308,104
FILING DATE: 16-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/300,266
FILING DATE: 02-SEP-1994
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/289,221
FILING DATE: 12-AUG-1994
ATTORNEY/AGENT INFORMATION:
NAME: Ihnen, Jeffrey L.
REGISTRATION NUMBER: 28,957
REFERENCE/DOCKET NUMBER: 24884-109347
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-962-4810
TELEFAX: 202-962-8300
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 5914 base pairs
TYPE: nucleic acid
STRANDEDNESS: double
TOPOLOGY: linear
MOLECULE TYPE: CDNA
HYPOTHEetical: NO
ANTI-SENSE: NO
ORIGINAL SOURCE:
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: 120..5711
PCT-US95-10202-1

Query Match 99.9%; Score 5585.8; DB 5; Length 5914;
Best Local Similarity 100.0%; Pred. No. 0;
Matches 5587; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 ATGAGTTATATGCTGCTCTTCGCGGTGAGACATACAAAATGTCATTATAGCTATGAGAAA 60
DB 120 ATGAGTTATATGCTGCTCTTCGCGGTGAGAGAGTACAAAATGTCATTATAGCTATGAGAAA 179
QY 61 ATCTTAGAGTGCCCATGTGCTGAGAGTATGATCAAGAACCTGCTCCCAAGGTGAC 120
DB 180 ATCTTAGAGTGCCCATGTGCTGAGAGTATGATCAAGAACCTGCTCCCAAGGTGAC 239
QY 121 CACATATTTTGGAAATTTTGCATGCTGAAACTTCTCAACAGAAAGAAAGGCGCTTCACAG 180
DB 240 CACATATTTTGGAAATTTTGCATGCTGAAACTTCTCAACAGAAAGAAAGGCGCTTCACAG 299
QY 181 TGTCTTTATGTAGATGATATTAACCAAAAAGAGCCTACAGAAAGTACGAGATTAGT 240
DB 300 TGTCTTTATGTAGATGATATTAACCAAAAAGAGCCTACAGAAAGTACGAGATTAGT 359
QY 241 CAACGTGTGAGAGAGCTATGAAATCATTTGTGCTTTGAGTTGAGTACACAGTTTGGAG 300
DB 360 CAACGTGTGAGAGAGCTATGAAATCATTTGTGCTTTGAGTTGAGTACACAGTTTGGAG 419
QY 301 TATGCAAAACAGCTATATTTTGCAAAAAAGAAAATTAACCTCTGACATCTAAAGAT 360

```

Db 420 TATGCAACACCTATATTTTGGCAAAAAGGAAATAAATCTCTCGAATCATCTAAAGAT 479
OY 361 GAAGTTCTATCAACCAAGATATGGGCTACAGAAACCGTGGCAAAAGACTTCTACAGAGT 420
Db 480 GAAGTTCTATCAACCAAGATATGGGCTACAGAAACCGTGGCAAAAGACTTCTACAGAGT 539
OY 421 GAACCCGAAATCCCTTCCTTCAGAGAAACAGTCTCAAGTCTCAACCTCTAACCCTTGA 480
Db 540 GAACCCGAAATCCCTTCCTTCAGAGAAACAGTCTCAAGTCTCAACCTCTAACCCTTGA 599
OY 481 ACTGTGAGAACTGTAGAGCAAAAGCGGATACAACTCAAAAGACGCTGTCTACATT 540
Db 600 ACTGTGAGAACTGTAGAGCAAAAGCGGATACAACTCAAAAGACGCTGTCTACATT 659
OY 541 GAATTTGGATCTGATCTTCTGGAAGATACCGTTAATAAGGCACTTATTGCAAGTGGGA 600
Db 660 GAATTTGGATCTGATCTTCTGGAAGATACCGTTAATAAGGCACTTATTGCAAGTGGGA 719
OY 601 GATCAAGAAATGTTACAAATACACCCCTCAAGAAACAGGATGAATCATGTTGGATTCT 660
Db 720 GATCAAGAAATGTTACAAATACACCCCTCAAGAAACAGGATGAATCATGTTGGATTCT 779
OY 661 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGACGGATGTAACAATACTGAAACATCATCA 720
Db 780 GCAAAAAAGGCTGCTTGTGAATTTTCTGAGACGGATGTAACAATACTGAAACATCATCA 839
OY 721 CCCAGTATATGATTTGAACACACAGAGGCTGAGAGGCTGAGAGGCTACCGAAAG 780
Db 840 CCCAGTATATGATTTGAACACACAGAGGCTGAGAGGCTGAGAGGCTACCGAAAG 899
OY 781 TATCAGGGTATGTTCTGTTTCAAACTGTGAGAGGCTGAGAGGCTACCGAAAG 840
Db 900 TATCAGGGTATGTTCTGTTTCAAACTGTGAGAGGCTGAGAGGCTACCGAAAG 959
OY 841 AGCTCATTTACGATGAGACAGAGATTTATTACTCACTAAAGACAGATATGTTAGAA 900
Db 960 AGCTCATTTACGATGAGACAGAGATTTATTACTCACTAAAGACAGATATGTTAGAA 1019
OY 901 AAGGCTGAATCTGTAATTAAGCAACAGGCTGGCTAGCAAGAGGCTCAATTAACGA 960
Db 1020 AAGGCTGAATCTGTAATTAAGCAACAGGCTGGCTAGCAAGAGGCTCAATTAACGA 1079
OY 961 TGGGCTGGAAGTAAGAAACATGTAATGATAGGCGAGATCCGACACAGAAAGGTA 1020
Db 1080 TGGGCTGGAAGTAAGAAACATGTAATGATAGGCGAGATCCGACACAGAAAGGTA 1139
OY 1021 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGAATTAAGCAGAACTCCATGC 1080
Db 1140 GATCTGAATGCTGATCCCTGTGTGAGAGAAAGAAATGAATTAAGCAGAACTCCATGC 1139
OY 1081 TCAGAGAACTCTAGAGAACTGAGAGATGTTCTGTAATACATTAATAGCAGATTACG 1140
Db 1200 TCAGAGAACTCTAGAGAACTGAGAGATGTTCTGTAATACATTAATAGCAGATTACG 1259
OY 1141 AAAGTTATGAGTGTGTTTCCAGAGATGATGAACTGTAGGTTCTGATGACTCATGAT 1200
Db 1260 AAAGTTATGAGTGTGTTTCCAGAGATGATGAACTGTAGGTTCTGATGACTCATGAT 1319
OY 1201 GGGGAGTCTGAATCAAAATGCCAAAGTACGATATTTGACGTTCTTAATGAGGTAGT 1260
Db 1320 GGGGAGTCTGAATCAAAATGCCAAAGTACGATATTTGACGTTCTTAATGAGGTAGT 1379
OY 1261 GAATATTCTGTTCTTCAAGAGAAATAGACTTACTGGCAGTATCTCATGAGGCTTTA 1320
Db 1380 GAATATTCTGTTCTTCAAGAGAAATAGACTTACTGGCAGTATCTCATGAGGCTTTA 1439
OY 1321 ATATGTAAGAGTGAAGAGTTCACCTCAAAATCACTAGAGATTAATTTGAAGACAAATA 1380
Db 1440 ATATGTAAGAGTGAAGAGTTCACCTCAAAATCACTAGAGATTAATTTGAAGACAAATA 1499
OY 1381 TTTGGGAAAACCTATCGGAAGAGGAGGCTCCCAACTTAAGCCATGTAAGTAAAT 1440
Db 1500 TTTGGGAAAACCTATCGGAAGAGGAGGCTCCCAACTTAAGCCATGTAAGTAAAT 1559

OY 1441 CTAATTAAGAGAGATTTGTTACTGAGCCACAGATTAATACAGAGGCTCCCTCACAAT 1500
Db 1560 CTAATTAAGAGAGATTTGTTACTGAGCCACAGATTAATACAGAGGCTCCCTCACAAT 1619
OY 1501 AAATTAAGCGTAAAGAGAGACTTACATCAGGCGCTTCACTCTGAGAGATTTTATCAAGAA 1560
Db 1620 AAATTAAGCGTAAAGAGAGACTTACATCAGGCGCTTCACTCTGAGAGATTTTATCAAGAA 1679
OY 1561 GCAGATTTGGAGTTCAAAAGACTCTGAAATGATAAATCAGGGAATTAACCAAGGAG 1620
Db 1680 GCAGATTTGGAGTTCAAAAGACTCTGAAATGATAAATCAGGGAATTAACCAAGGAG 1739
OY 1621 CAGATGCTCAAGTATGAATTAATTAATAGTGTCTATGGAATTAAGAAAGGATAT 1680
Db 1740 CAGATGCTCAAGTATGAATTAATTAATAGTGTCTATGGAATTAAGAAAGGATAT 1799
OY 1681 TCTATTCAGATGAGAAATAATCTTAACCAATAGATCAGTCAAGAAAGAAATCTCTTC 1740
Db 1800 TCTATTCAGATGAGAAATAATCTTAACCAATAGATCAGTCAAGAAAGAAATCTCTTC 1859
OY 1741 AAAACGAAAGCTGAACCTATTAAGACAGATTAAGCAATATGGAATCTGAATTAATATC 1800
Db 1860 AAAACGAAAGCTGAACCTATTAAGACAGATTAAGCAATATGGAATCTGAATTAATATC 1919
OY 1801 CACATTTCAAAAGACCTTAAGAAAGATAGGCTGAGAGAGAGTCTTCAACAGGATAT 1860
Db 1920 CACATTTCAAAAGACCTTAAGAAAGATAGGCTGAGAGAGAGTCTTCAACAGGATAT 1979
OY 1861 CATGGCGTTGAACAGTATGATGAGAAATCAAGCCACCTTAATTTACTGAATTTGAA 1920
Db 1980 CATGGCGTTGAACAGTATGATGAGAAATCAAGCCACCTTAATTTACTGAATTTGAA 2039
OY 1921 ATTGATGTTGTTCTAGCAGTGAAGATTAAGAAAGAAAGTACACCAATATGCAATC 1980
Db 2040 ATTGATGTTGTTCTAGCAGTGAAGATTAAGAAAGAAAGTACACCAATATGCAATC 2099
OY 1981 AGGCACAGCAAAACCTCAACTCATGGAAGTAAAGACCTGCAACTGAGAGGCAAG 2040
Db 2100 AGGCACAGCAAAACCTCAACTCATGGAAGTAAAGACCTGCAACTGAGAGGCAAG 2159
OY 2041 AGTAACAAAGCCAAATGAACAGACAAATGAAGACATGACAGTACTTCCAGAGCTG 2100
Db 2160 AGTAACAAAGCCAAATGAACAGACAAATGAAGACATGACAGTACTTCCAGAGCTG 2219
OY 2101 AAGTTAACAAATGCACTGCTTCTTTACTAAGTGTCAATTAACAGTAAAGTAAAGAA 2160
Db 2220 AAGTTAACAAATGCACTGCTTCTTTACTAAGTGTCAATTAACAGTAAAGTAAAGAA 2279
OY 2161 TTTGCAATCTTACGCTTCCAAAGAGAAAGAAAGAAAGTAAAGTAAAGTAAAGT 2220
Db 2280 TTTGCAATCTTACGCTTCCAAAGAGAAAGAAAGTAAAGTAAAGTAAAGTAAAGT 2339
OY 2221 TCTATTAATGCTGAAGACCCCAAGATCTCATGTTAATGTGAGAAAGGCTTTTCAACT 2280
Db 2340 TCTATTAATGCTGAAGACCCCAAGATCTCATGTTAATGTGAGAAAGGCTTTTCAACT 2399
OY 2281 GAAAGATCTGTAGAGAGTACGATATTTCAATGTTACTGCTGATGATTAAGCACTAG 2340
Db 2400 GAAAGATCTGTAGAGAGTACGATATTTCAATGTTACTGCTGATGATTAAGCACTAG 2459
OY 2341 GAAAGTATCTGCTTACTGGAAGTATAGCACTCTAGGGAAGGCAAAACAGAACCAATTA 2400
Db 2460 GAAAGTATCTGCTTACTGGAAGTATAGCACTCTAGGGAAGGCAAAACAGAACCAATTA 2519
OY 2401 TGTGTAGTCACTGTGAGCAATTTGAAAAACCCCAAGGACTAATTCATGTTGTTCCAA 2460
Db 2520 TGTGTAGTCACTGTGAGCAATTTGAAAAACCCCAAGGACTAATTCATGTTGTTCCAA 2579
OY 2461 GATTAATGAATTAAGCAAGAGGCTTTAAGTATTCATTTGGAGCATGAAGTTAACCAAGT 2520
Db 2580 GATTAATGAATTAAGCAAGAGGCTTTAAGTATTCATTTGGAGCATGAAGTTAACCAAGT 2639

QY 2521 CGGGAACACATGATGAAATGGAAGAGTGAATGCTGCTAGTATTTGGAGATACA 2580
 |||||
 Db 2640 CGGGAACACATGATGAAATGGAAGAGTGAATGCTGCTAGTATTTGGAGATACA 2699
 |||||
 QY 2581 TTCAAGGTTTAAAGCCGACATCTTCTGTTTCAATCCGAAATTCAGAAAG 2640
 |||||
 Db 2700 TTCAAGGTTTAAAGCCGACATCTTCTGTTTCAATCCGAAATTCAGAAAG 2759
 |||||
 QY 2641 GAATGTGCACATCTCTGCGACCTGGGTCTTAAAGAAACAAAGTCCAAAGTCACT 2700
 |||||
 Db 2760 GAATGTGCACATCTCTGCGACCTGGGTCTTAAAGAAACAAAGTCCAAAGTCACT 2819
 |||||
 QY 2701 TTGAATGTGAACAAAGGAAGAAATCAAGAAAGAAATGAGTCTAATTCAGGCTGTA 2760
 |||||
 Db 2820 TTGAATGTGAACAAAGGAAGAAATCAAGAAAGAAATGAGTCTAATTCAGGCTGTA 2879
 |||||
 QY 2761 CAGACAGTTAATACACAGAGGCTTCTGTTGTTGTCAGAAAGATTAAGCAGTGAAT 2820
 |||||
 Db 2880 CAGACAGTTAATACACAGAGGCTTCTGTTGTTGTCAGAAAGATTAAGCAGTGAAT 2939
 |||||
 QY 2821 AATGCCAAATGTAGTATCAAGAGGCTTAGGTTTGTCTATCTCAGTTCAGAGGC 2880
 |||||
 Db 2940 AATGCCAAATGTAGTATCAAGAGGCTTAGGTTTGTCTATCTCAGTTCAGAGGC 2999
 |||||
 QY 2881 AACGAACCTGACATCTACTCCAAATTAACATGAGCTTTTACAAACCCATATCGTATA 2940
 |||||
 Db 3000 AACGAACCTGACATCTACTCCAAATTAACATGAGCTTTTACAAACCCATATCGTATA 3059
 |||||
 QY 2941 CCACACCTTTTCCATCAAGTCAATTTGTTAAATTAATGAATAAATGCTGTAGAG 3000
 |||||
 Db 3060 CCACACCTTTTCCATCAAGTCAATTTGTTAAATTAATGAATAAATGCTGTAGAG 3119
 |||||
 QY 3001 GAAACCTTTGAGGAACATTCATGTCACTGAGAAAGAAATGAGAAATGAGAACTTCCA 3060
 |||||
 Db 3120 GAAACCTTTGAGGAACATTCATGTCACTGAGAAAGAAATGAGAAATGAGAACTTCCA 3179
 |||||
 QY 3061 AGTACAGTGAACACATTTAGCCGTATTAATTAATGAGAAATGTTTAAAGAGCCAGC 3120
 |||||
 Db 3180 AGTACAGTGAACACATTTAGCCGTATTAATTAATGAGAAATGTTTAAAGAGCCAGC 3239
 |||||
 QY 3121 TCAAGCATATTAATGAAGTGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA 3180
 |||||
 Db 3240 TCAAGCATATTAATGAAGTGTCCAGTACTAATGAAGTGGGCTCCAGTATTAATGA 3299
 |||||
 QY 3181 ATAGGTTCCAGTGAATGAACATTCACAGACATAGTAGAAGAACAGAGGCGCAAAATG 3240
 |||||
 Db 3300 ATAGGTTCCAGTGAATGAACATTCACAGACATAGTAGAAGAACAGAGGCGCAAAATG 3359
 |||||
 QY 3241 AATGCTATGCTTAATTAAGGGGTTTTCACACCTGAGTCTATTAACAAAGTCTCTGGA 3300
 |||||
 Db 3360 AATGCTATGCTTAATTAAGGGGTTTTCACACCTGAGTCTATTAACAAAGTCTCTGGA 3419
 |||||
 QY 3301 AGTAATGTGAACATCTGAATTAAGAAAGCAAGATTAAGAAAGTACAGCTGTT 3360
 |||||
 Db 3420 AGTAATGTGAACATCTGAATTAAGAAAGCAAGATTAAGAAAGTACAGCTGTT 3479
 |||||
 QY 3361 AATACAGATTTCTCTCATATCTGATTTCAATTAAGTAAACAGCCTATGGGAAGTAGT 3420
 |||||
 Db 3480 AATACAGATTTCTCTCATATCTGATTTCAATTAAGTAAACAGCCTATGGGAAGTAGT 3539
 |||||
 QY 3421 CATGATCTCAGGTTTGTTCGAGACACCTGATGACCTGTATGATGATGTAATTAAG 3480
 |||||
 Db 3540 CATGATCTCAGGTTTGTTCGAGACACCTGATGACCTGTATGATGATGTAATTAAG 3599
 |||||
 QY 3481 GAAGATCTAGTTTGTGGAAGAAATGACATTAAGGAAGTTCTGCTTTTAAAGCAAGC 3540
 |||||
 Db 3600 GAAGATCTAGTTTGTGGAAGAAATGACATTAAGGAAGTTCTGCTTTTAAAGCAAGC 3659
 |||||
 QY 3541 GTCCAGAAAGAGAGCTTAGCAGAGTCTTAGCCCTTACCCATACATTCATTGGCTAG 3600
 |||||
 Db 3660 GTCCAGAAAGAGAGCTTAGCAGAGTCTTAGCCCTTACCCATACATTCATTGGCTAG 3719
 |||||
 QY 3601 GGTATCCGAAGAGGGGCCAAGAAATTAGATCTCTGAGAAAGAACTTATCTAGTAGAT 3660
 |||||

Db 3720 GGTATCCGAAGAGGGGCCAAGAAATTAGAGTCTCAGAGAGAACTTATCTAGAGAT 3779
 |||||
 QY 3661 GAAGAGTCTCCCTGTTCCAAACATCTGTTATTTGGTAAGTAACATTAATCTCTCAG 3720
 |||||
 Db 3780 GAAGAGTCTCCCTGTTCCAAACATCTGTTATTTGGTAAGTAACATTAATCTCTCAG 3839
 |||||
 QY 3721 TCTACTAGCATATGACCCGTTGCTACGAGTGTGTTAAGAACACAGAGAGAAATTTA 3780
 |||||
 Db 3840 TCTACTAGCATATGACCCGTTGCTACGAGTGTGTTAAGAACACAGAGAGAAATTTA 3899
 |||||
 QY 3781 TTATCATTAAGAAATAGCTTAATTAATGACTGCAATTAATTAATTTGGCAAGGCACT 3840
 |||||
 Db 3900 TTATCATTAAGAAATAGCTTAATTAATGACTGCAATTAATTAATTTGGCAAGGCACT 3959
 |||||
 QY 3841 CAGGAACATCACTTATGAGAGAAACAAATGTTCTGTACTCTGTTTCTACAGTGC 3900
 |||||
 Db 3960 CAGGAACATCACTTATGAGAGAAACAAATGTTCTGTACTCTGTTTCTACAGTGC 4019
 |||||
 QY 3901 AGTAATTTGAAGAACTTACTGCAATTAACAAACCCAGATCTTCTTATGATGTTCT 3960
 |||||
 Db 4020 AGTAATTTGAAGAACTTACTGCAATTAACAAACCCAGATCTTCTTATGATGTTCT 4079
 |||||
 QY 3961 TCCAAAACAATGAGCATCACTGTAAGAACCCAGGAGTTGTTGACTGACAGAAATG 4020
 |||||
 Db 4080 TCCAAAACAATGAGCATCACTGTAAGAACCCAGGAGTTGTTGACTGACAGAAATG 4139
 |||||
 QY 4021 GTTTCAGATGAAGAAAGAGAAAGGAGGCTTGAAGAAATTAATCAAGAAAGCAAGC 4080
 |||||
 Db 4140 GTTTCAGATGAAGAAAGAGAAAGGAGGCTTGAAGAAATTAATCAAGAAAGCAAGC 4199
 |||||
 QY 4081 ATGATTTCAAACTTATAGTGAAGCAGATCTGGGTGTAGAGTGAACCAAGCCTCTGAA 4140
 |||||
 Db 4200 ATGATTTCAAACTTATAGTGAAGCAGATCTGGGTGTAGAGTGAACCAAGCCTCTGAA 4259
 |||||
 QY 4141 GACTGCTGAGGCTATCTCTCAAGATGACATTTTAACCTACGACAGAGGATACCAG 4200
 |||||
 Db 4260 GACTGCTGAGGCTATCTCTCAAGATGACATTTTAACCTACGACAGAGGATACCAG 4319
 |||||
 QY 4201 CAACATTAACCTGATTAAGCCTCAGAGAAATGGCTGAGTACAGTGTGTAGAACAG 4260
 |||||
 Db 4320 CAACATTAACCTGATTAAGCCTCAGAGAAATGGCTGAGTACAGTGTGTGTAGAACAG 4379
 |||||
 QY 4261 CATGGAGCCAGCCTTCTTAACAGTACCTTCATCAATTAATGACTCTTCTGCTGAG 4320
 |||||
 Db 4380 CATGGAGCCAGCCTTCTTAACAGTACCTTCATCAATTAATGACTCTTCTGCTGAG 4439
 |||||
 QY 4321 GACCTGCAATTCAGAAACAAAGCAATCAGAAACAGATTAATTAATCTTACAGAAAGT 4380
 |||||
 Db 4440 GACCTGCAATTCAGAAACAAAGCAATCAGAAACAGATTAATTAATCTTACAGAAAGT 4499
 |||||
 QY 4381 AGTGAATACCTTATTAAGCAGAAATCCAGAAAGGCTTCTGCTGCAAGTTGAGTGTCT 4440
 |||||
 Db 4500 AGTGAATACCTTATTAAGCAGAAATCCAGAAAGGCTTCTGCTGCAAGTTGAGTGTCT 4559
 |||||
 QY 4441 GCAGATAGTTTACACAGTAAATAAAGAACACAGAGTGAAGAGTATCCCTCTTAA 4500
 |||||
 Db 4560 GCAGATAGTTTACACAGTAAATAAAGAACACAGAGTGAAGAGTATCCCTCTTAA 4619
 |||||
 QY 4501 TGCCATCATTAATGATAGTGTGATACATGACAGTGTCTGGAGATCTTCAAGATTA 4560
 |||||
 Db 4620 TGCCATCATTAATGATAGTGTGATACATGACAGTGTCTGGAGATCTTCAAGATTA 4679
 |||||
 QY 4561 AACTAACCATCTCAAGAGGAGCTCATTAAGTTGTTATGTTGAGAGCAAGAGCTGGAA 4620
 |||||
 Db 4680 AACTAACCATCTCAAGAGGAGCTCATTAAGTTGTTATGTTGAGAGCAAGAGCTGGAA 4739
 |||||
 QY 4621 GAGTCTGGCCACAGATTTGACGGAATCTTACTTCCAAAGCAAGATCTAGAGGA 4680
 |||||
 Db 4740 GAGTCTGGCCACAGATTTGACGGAATCTTACTTCCAAAGCAAGATCTAGAGGA 4799
 |||||
 QY 4681 ACCCTTACCTGGAATGTGAATAGCCTTCTCTGATGACCTGAAATCTGATCTCT 4740
 |||||

```
Db 4800 ACCCTTACGTGAATCTGAATCAGCTCTTCTGTGATGACCTGAATCTGATCTTCT 4859
OY 4741 GAAGCAGAGCCCGAGATGAGCTGTGTGGCAACATACCATCTTCAACCTCTGCATTG 4800
Db 4860 GAAGCAGAGCCCGAGATGAGCTGTGTGGCAACATACCATCTTCAACCTCTGCATTG 4919
OY 4801 AAAGTCCCAATTGAAGTGCAGATCTGCCAGAGTCCAGTGGTGCATCTACT 4860
Db 4920 AAAGTCCCAATTGAAGTGCAGATCTGCCAGAGTCCAGTGGTGCATCTACT 4979
OY 4861 GATACCTGCTGGTATATGCAATGAGAGAAAGTGTAGCAGAGAGAGCCAGAAATTGACA 4920
Db 4980 GATACCTGCTGGTATATGCAATGAGAGAAAGTGTAGCAGAGAGAGCCAGAAATTGACA 5039
OY 4921 GCTTCAACAGAAAGGCTCAACAAAAGATGTCCATGTGTGTGCTGCTGACCCAGAA 4980
Db 5040 GCTTCAACAGAAAGGCTCAACAAAAGATGTCCATGTGTGTGCTGACCCAGAA 5099
OY 4981 GAATTATGCTGCTGATACAGTTTCCAGAAAACACACATCACTTTAATCTAATT 5040
Db 5100 GAATTATGCTGCTGATACAGTTTCCAGAAAACACACATCACTTTAATCTAATT 5159
OY 5041 ACTGAAGAGACTACTCATGTGTATGAAAAAGATGCTGATGTGTGTGAACGACA 5100
Db 5160 ACTGAAGAGACTACTCATGTGTATGAAAAAGATGCTGATGTGTGTGAACGACA 5219
OY 5101 CTGAAATTTTCTTGTGAATTCGGGAGAGAAATGGTAGTACTATTCTGGGTGACC 5160
Db 5220 CTGAAATTTTCTTGTGAATTCGGGAGAGAAATGGTAGTACTATTCTGGGTGACC 5279
OY 5161 CAGTCTATTAAAGAAAGAAATGCTGAATGAGCATGTTTGAAGTCAGAGAGATGTG 5220
Db 5280 CAGTCTATTAAAGAAAGAAATGCTGAATGAGCATGTTTGAAGTCAGAGAGATGTG 5339
OY 5221 GTCAATGAGAGAAACCAAGTCCAAAGCGAGCAGAGAAATCCAGAGACAGAAAGATC 5280
Db 5340 GTCAATGAGAGAAACCAAGTCCAAAGCGAGCAGAGAAATCCAGAGACAGAAAGATC 5399
OY 5281 TTCAGGGGGCTAGAAATGTGTGATGTGGCCCTTCAACACATGCCCAGATCACTG 5340
Db 5400 TTCAGGGGGCTAGAAATGTGTGATGTGGCCCTTCAACACATGCCCAGATCACTG 5459
OY 5341 GAATGATGTGACAGCTGTGTGCTCTGTGTGGAAGAGCTTTCATCTTCACTTACCCTT 5400
Db 5460 GAATGATGTGACAGCTGTGTGCTCTGTGTGGAAGAGCTTTCATCTTCACTTACCCTT 5519
OY 5401 GGCACAGGTGTCCACCCCAATTGTGGTGTGCAGCCAGATGCTGACAGAGACAAATGGC 5460
Db 5520 GGCACAGGTGTCCACCCCAATTGTGGTGTGCAGCCAGATGCTGACAGAGACAAATGGC 5579
OY 5461 TTCCATGCAATTGGGCAATGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGTGGAC 5520
Db 5580 TTCCATGCAATTGGGCAATGTGTGAGGACCTGTGTGACCCGAGAGTGGGTGTGGAC 5639
OY 5521 AGTGTAGACTCTACAGTGCAGAGAGTGCAGACCTGATACCCAGATCCCCAGAC 5580
Db 5640 AGTGTAGACTCTACAGTGCAGAGAGTGCAGACCTGATACCCAGATCCCCAGAC 5699
OY 5581 AGCCACTAC 5589
Db 5700 AGCCACTAC 5708
```

Search completed: June 27, 2003, 20:52:58
Job time : 282.58 secs

